DOCUMENT RESUME

ED 085 010 HE 004 904

AUTHOR	Humphries, Frederick S.; And Others
TITLE	Thirteen-College Curriculum Program Progress Report: 1967-1972. A Major Curriculum Effort to Reduce Attrition Among Black College Students.
INSTITUTION	Institute for Services to Education, Washington, D.C.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Div. of Higher Education Research.
PUB DATE	Dec 72
CONTRACT	OEC-0-8-070867
NOTE	72p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Consortia; *Curriculum Development; Dropouts; *Educational Programs; Freshmen; *Higher Education; *Negro Institutions; Negro Students; Reports; *Teacher Attitudes; Teacher Developed Materials
IDENTIFIERS	Institute for Services to Education; ISE; TCCP; *Thirteen College Curriculum Program

ABSTRACT

The Thirteen-College Curriculum Program (TCCP) is a massive, joint effort by a group of black colleges and the Institute for Services to Education (ISE) to develop active, relevant, and workable educational programs for students enrolled in predominantly black colleges. The TCCP was initiated the summer of 1967 by the Thirteen-College Consortium (TCC). The TCCP has subsequently been adopted by additional groups of colleges. This document presents a progress report of the TCCP, first by explaining the TCCP, then describing its effort to use teachers to develop their own class materials, and the effort of the TCCP to disseminate teacher's evaluation and attitudes of the program. The fifth section contains program results, including: socioeconomic background of students, retention in college and grade performance; program outcomes represented by academic test performance and changes in personality; attitude, personality, and developmental results; attitudes of graduating seniors toward their freshmen year; and the impact on students and teachers as perceived by teachers. The growth of the program is discussed in the sixth section. Appendices include a catalog of materials, a description of the 1971 summer workshop, and cycles of development of the TCCP. (Author/PG)

FILMED FROM BEST AVAILABLE COPY

ED 085010

HE

RESEARCH REPORT

THIRTEEN-COLLEGE CURRICULUM PROGRAM PROGRESS REPORT: 1967-1972

A MAJOR CURRICULUM EFFORT TO REDUCE ATTRITION AMONG BLACK COLLEGE STUDENTS

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

by

FREDERICK S. HUMPHRIES
Vice-President

J. THOMAS PARMETER
Senior Research Associate
(Now at Michigan State University)

JOSEPH TURNER
Senior Research Associate

HE 004 904

INSTITUTE FOR SERVICES TO EDUCATION, INC.
2001 S STREET, N.W. WASHINGTON, D.C. 20009

ISE

The Institute for Services to Education, Inc., (ISE) was incorporated in 1965 as a non-profit organization. Under grants from government agencies and private foundations, it undertakes educational programs in cooperation with colleges, universities, and other educational institutions.

Elias Blake, Jr., President.

Frederick S. Humphries, Vice-President and Director, Thirteen-College Curriculum Program (TCCP).

> TCCP is designed to reduce the attrition rate of entering freshmen by developing new instructional materials, new teaching styles, and new faculty arrangements for instruction.

E. Oscar Woolfolk, Director, Cooperative Academic Planning Program (CAP).

> CAP is assisting black colleges improve their academic program planning. It is part of a larger project acronymically referred to as TACTICS -- Technical Assistance Consortium to Improve College Services.

James A. Welch, Director, Management Information Systems (MIS).

> MIS is designed to improve the information handling and management procedures in developing institutions. It also is a part of TACTICS.

Jesse Ingram, Director, Biracial Study Program.

> This program helps certain unique biracial colleges improve their capacity to interpret the results of their programs in terms of the development of their students.

The research reported herein was supported in part by USOE Contract No. OEC 0-8-070867, Division of Higher Education Research.

ED 085010

THIRTEEN-COLLEGE CURRICULUM PROGRAM PROGRESS REPORT: 1967-1972

A MAJOR CURRICULUM EFFORT TO REDUCE ATTRITION AMONG BLACK COLLEGE STUDENTS

by

FREDERICK S. HUMPHRIES
Vice-President

J. THOMAS PARMETER
Senior Research Associate
(Now at Michigan State University)

JOSEPH TURNER
Senior Research Associate

Institute for Services to Education, Inc.
2001 'S' Street, N.W.
Washington, D.C. 20009

December 1972

– ABOUT THE INSTITUTE FOR SERVICES TO EDUCATION –

The Institute for Services to Education was incorporated as a non-profit organization in 1965 and received a basic grant from the Carnegie Corporation of New York. The organization is founded on the principle that education today requires a fresh examination of what is worth teaching and how to teach it. ISE undertakes a variety of educational tasks, working cooperatively with other educational institutions, under grants from government agencies and private foundations. ISE is a catalyst for change. It does not just produce educational materials or techniques that are innovative; it develops, in cooperation with teachers and administrators, procedures for effective installation of successful materials and techniques in the colleges.

ISE is headed by Dr. Elias Blake, Jr., a former teacher and is staffed by college teachers with experience in working with disadvantaged youth and Black youth in educational settings both in predominantly Black and predominantly white colleges and schools.

ISE's Board of Directors consists of persons in the higher education system with histories of involvement in curriculum change. The Board members are:

Vernon Alden	Chairman of the Board, The Boston Company, Boston, Massachusetts
Herman Branson	President, Lincoln University
Kingman Brewster, Jr.	President, Yale University
Donald Brown	The Center for Research on Learning and Teaching, University of Michigan
Arthur F. Davis	Graduate Professor in English, Howard University
Carl J. Dolce	Dean, School of Education, North Carolina State University
Alexander Heard	Chancellor, Vanderbilt University
Vivian Henderson	President, Clark College
Martin Jenkins	Director, Urban Affairs, ACE
Samuel Nabrit (Chairman)	Executive Director, Southern Fellowship Fund, Atlanta, Georgia
Arthur Singer	Vice-President, Sloan Foundation, New York, N.Y.
Otis Singletary	President, University of Kentucky
C. Vann Woodward	Professor of History, Yale University
Stephen Wright	Vice-President of the Board, CEEB
Jerrold Zacharias	Professor of Physics, Massachusetts Institute of Technology

- ABOUT THE THIRTEEN-COLLEGE CURRICULUM PROGRAM –

From 1967 to the present, ISE has been working cooperatively with the Thirteen College Consortium in developing the Thirteen College Curriculum Program. The Thirteen College Curriculum Program is an educational experiment that included developing new curricular materials for the entire freshman year of college in the areas of English, Mathematics, Social Science, Physical Science, and Biology and two sophomore year courses, Humanities and Philosophy. The program is designed to reduce the attrition rate of entering freshman through well thought-out, new curricular materials, new teaching styles, and new faculty arrangements for instruction. In addition, the program seeks to alter the educational pattern of the institutions involved by changing blocks of courses rather than by developing single courses. In this sense, the Thirteen College Curriculum Program is viewed not only as a curriculum program with a consistent set of academic goals for the separate courses, but also as a vehicle to produce new and pertinent educational changes within the consortium institutions. At ISE, the program is directed by Dr. Frederick S. Humphries, Vice-President. The curricular development for the specific courses and evaluation of the program are provided by the following persons:

COURSE	ISE STAFF
English	Mr. Sloan Williams, Senior Program Associate Miss Ethel Lewis, Program Associate Mr. Charles Hodges, Research Assistant
Social Science	Dr. George King, Senior Program Associate Mrs. Mary Brown, Program Associate Dr. Al-Tony Gilmore, Program Associate Miss Charlottie Simpson, Secretary
Mathematics	Mr. Bernis Barnes, Senior Program Associate Dr. Phillip McNeil, Program Associate Dr. Walter Talbot, Consultant Mrs. Debrah Johnson, Secretary
Physical Science	Dr. Leroy Colquitt, Senior Program Associate Dr. Roosevelt Calbert, Program Associate Dr. Ralph Turner, Consultant Miss LuCinda Johnson, Secretary
Biology	Dr. Charles Goolsby, Senior Program Associate Dr. Daniel Obasun, Program Associate Dr. Paul Brown, Consultant Mrs. Jeanette Faulkner, Secretary

COURSE	ISE STAFF
Humanities	Mr. Clifford Johnson, Senior Program Associate Mr. Roger Dickerson, Consultant Mr. Keorapetse W. Kgositsile, Consultant Miss Margot Willett, Research Assistant
Philosophy	Dr. Henry Olela, Program Associate Dr. Conrad Snowden, Consultant Mrs. Alma J. Ealy, Secretary
Counseling	Dr. Gerald Durley, Senior Program Associate Dr. Joseph Turner, Senior Research Associate Mr. John Faxio, Research Assistant Mrs. Judith Rogers, Secretary

In addition, Miss Patricia Parrish serves as Executive Assistant to the Vice-President and Mrs. Melvina Kelly serves as Secretary to the Vice-President.

The curriculum staff is assisted in the generation of new educational ideas and teaching strategies by teachers in the participating colleges and outside consultants. Each of the curriculum areas has its own advisory committee, with members drawn from distinguished scholars in the field but outside the program.

The number of colleges participating in the program has grown from the original thirteen of 1967 to nineteen in 1970. The original thirteen colleges are:

Alabama A & M University	Huntsville, Alabama
Bennett College	Greensboro, North Carolina
Bishop College	Dallas, Texas
Clark College	Atlanta, Georgia
Florida A & M University	Tallahassee, Florida
Jackson State College	Jackson, Mississippi
Lincoln University	Lincoln University, Pennsylvania
Norfolk State College	Norfolk, Virginia
North Carolina A & T State University	Greensboro, North Carolina
Southern University	Baton Rouge, Louisiana
Talladega College	Talladega, Alabama
Tennessee A & T State University	Nashville, Tennessee
Voorhees College	Denmark, South Carolina

A fourteenth college joined this consortium in 1968, although it is still called the Thirteen-College Consortium. The fourteenth member is:

Mary Holmes Junior College	West Point, Mississippi

In 1970, five more colleges joined the effort although linking up as a separate consortium. The members of the Five-College Consortium, including a sixth added later, are:

Elizabeth City State University	Elizabeth City, North Carolina
Fayetteville State University	Fayetteville, North Carolina
Langston University	Langston, Oklahoma
Saint Augustines College	Raleigh, North Carolina
Southern University	Shreveport, Louisiana
Texas Southern University	Houston, Texas

In 1971, eight more colleges jointed the curriculum development effort as another consortium. The member of the Eight College Consortium are:

Alcorn A & M College	Lorman, Mississippi
Bethune-Cookman College	Daytona Beach, Florida
Grambling College	Grambling, Louisiana
Jarvis Christian College	Hawkins, Texas
LeMoyne-Owen College	Memphis, Tennessee
Southern University in New Orleans	New Orleans, Louisiana
University of Maryland, Eastern Shore	Princess Anne, Maryland
Virginia Union University	Richmond, Virginia

Seven additional colleges created still another consortium in 1972, entitled the Consortium for Curricular Change. These colleges are:

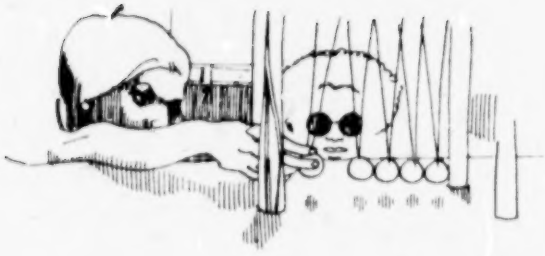
Coppin State College	Baltimore, Maryland
Huston-Tillotson College	Austin, Texas
Lincoln University	Jefferson City, Missouri
Mississippi Valley State College	Itta Bena, Mississippi
Shaw College	Detroit, Michigan
Bowie State College	Bowie, Maryland
Livingstone College	Salisbury, North Carolina

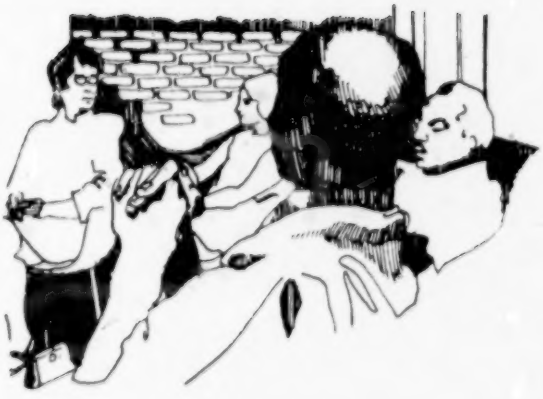
The Thirteen-College Curriculum Program has been supported by grants from:

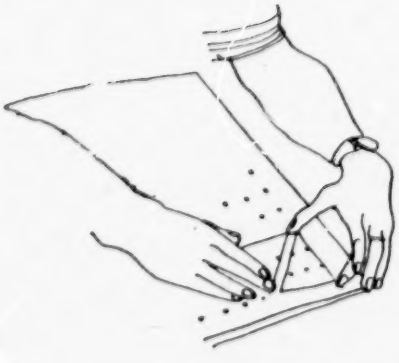
The Office of Education, Title III, Division of College Support
The Office of Education, Bureau of Research
The National Science Foundation, Division of the Undergraduate Education
The Ford Foundation
The Carnegie Corporation
The Esso Foundation

TABLE OF CONTENTS

		Page
I.	Introduction	1
II.	Thirteen-College Curriculum Program (TCCP)	2
III.	New Authors and Vertical Movement	4
IV.	Invention, Development, and Dissemination	6
V.	The Educational Challenge and Some Program Results	8
	Socio-Economic Background of Students	8
	Retention in College and Grade Performance	12
	Program Outcomes Represented by Academic Test Performance and Changes in Personality	15
	Attitude, Personality, and Developmental Results	17
	Attitudes of Graduating Seniors Toward Their Freshmen Year	18
	Impact on Students and Teachers as Perceived by Teachers	20
VI.	Growth of the Program	29
Appendix A:	Catalog of Materials	29
Appendix B:	The 1971 Summer Workshop	47
Appendix C:	The Cycles of Development	57







I. INTRODUCTION

The Thirteen-College Curriculum Program (TCCP) is a massive, joint effort by a group of black colleges and the Institute for Services to Education (ISE) to develop active, relevant, and workable educational programs for students enrolled in predominantly black colleges.

The TCCP was initiated the summer of 1967 by the Thirteen-College Consortium (TCC). The TCCP has subsequently been adopted, still called the TCCP, by additional groups of colleges. As of this writing five consortia (including the original TCC, which added a fourteenth college the second year) are using the TCCP and developing it further. The five consortia comprise 38 institutions -- 36 undergraduate programs and two graduate programs.

The TCCP started from the conviction that black colleges are still necessary in America. More black students are seeking higher education than ever before and more will be going to predominantly white institutions than ever before, but many still are not admitted to white institutions and many still find problems once they are admitted.

All colleges face new tasks today. Familiar notions as to what constitutes effective preparation for work, for graduate school and professional school, and for citizenship are all in question. The black colleges also face new tasks, but they no longer look to others for what to do but are defining their own purposes. They are themselves asking what is worth knowing and teaching.

The TCCP is of unprecedented scope and ambition. It is not speculation about what might go in college, not a fantasy or utopia, but deals with real people in real institutions. And where earlier efforts at reform have been limited to isolated components -- a particular course, new equipment, further education of teachers -- the TCCP tackles the entire problem, the whole system.

From the start, the men who conceived the Thirteen-College Curriculum Program, envisioned a project designed to effect change in all aspects of the thirteen colleges and universities that participated in the program. The objectives they established for the program were:

> To produce a new style of teaching in the predominantly Black college that would result in lower attrition rates and achievement that will be at least equal to or, possibly greater than those gained by students enrolled in traditional classes.
>
> To exert a healthy tension upon the institutions such that a climate is created whereby self-analysis and evaluation continuously exist, and wherein educational changes are made that reflect the results of these two processes.
>
> To develop new attitudes within the teachers in the institutions such that creative and effective curriculum changes can be made and sustained.

II. THIRTEEN-COLLEGE CURRICULUM PROGRAM (TCCP)

The educational development efforts of the TCCP have been aimed at:

(1) developing course content in English, Mathematics, Social Science, Physical Science, Biology, Humanities, and Philosophy that would be more topical and germane to the student's experience than those materials traditionally in use;

(2) Defining current problems in the teaching of these courses, along with the ramifications of and possible solutions to those problems;

(3) Deriving a philosophy of education that would stimulate teachers enough to think of the need for altering their attitudes toward their role in the classroom and their students' academic problems and basic needs;

(4) developing methodologies and techniques that would stimulate and improve students' learning processess, and motivate students to assume an active role in their own learning.

The materials and techniques that have been developed are based upon three assumptions.

The first, and probably most important assumption is that students can be more effectively motivated to learn and to become involved in the learning process when they are placed in a student-centered academic environment in which pedagogy and curriculum materials combine to ignite their intellectual curiosity; encourage a free exchange and expression of their own life styles, ideas, reflections, private insights and experiences; and build more positive self-images.

The second assumption is that optimum learning conditions are more apt to occur if teachers assume roles as student guides and curriculum innovators, then when they assume the stance of classroom arbiters and, presumably, sources of all worth-while knowledge.

The final assumption is that teachers, when freed from the structures of syllabi and rigid course content, become more creative and responsive to student's needs and, thereby, make their teaching more pertinent to the students and more enjoyable for themselves.

With these aims and assumptions as guides, the teachers of the TCCP, along with the ISE staff, have developed the kind of curriculum materials and teaching strategies that promote the desired classroom atmosphere and academic results.

These materials represent a process as much as a series of products--A unique process among college teachers in which they collaborate not on syllabi but on detailed teaching materials including ideas for classroom presentation! It is a system of cooperation among equals, review, trial teaching, and feedback. Basic work is done in a series of six-week summer workshops bringing together from 140 to 400 teachers distributed across the major disciplines in working parties. The process and detailed attention to what and how one teaches to achieve the major goals is the important generator of change.

Within each of the themes or units, a number of techniques have been developed for engendering in students a positive self-concept which is coupled with a hearty thirst for knowledge, and critical thinking stemming from processes of association necessary for making connections between life in general, one's own experiences in particular, and the works one reads or creates; and a more positive attitude toward writing, stemming from a desire to communicate one's creative thoughts with respect to science, mathematics, and humanities.

The institutionalizing of the process of these efforts will possibly determine the long-term viability of these efforts at curriculum reform. As of this writing, TCCP teachers working with ISE staff have written and published 34 student and teacher manuals, ranging in length from 25 to 500 pages. Appendix A is a catalog of materials currently in print and for sale (at cost) and currently in preparation.

III. NEW AUTHORS AND VERTICAL MOVEMENT

The traditional processes used to devise curriculum and teaching materials is one which is limited. A small community of "recognized" professors-educators, either singly or in groups, carried the burden and received the accolades for developing the materials used by the broader post secondary educational community. Therefore, it becomes inherent in these processes that unacclaimed faculty in untouted universities are less apt to be credited with membership in the community of curriculum developers.

The TCCP, through ISE, consciously rejected the traditional processes and adapted a method of active involvement of the teachers. It is ISE's contention that only through such involvement would we have a strong possibility to sustain the curriculum innovation initiated. Therefore, in its role of working with the colleges through the teachers, ISE served as a model of a particular teaching style, and as generators of creative materials. However, ISE adamantly refused to develop all of the methods and materials.

Instead, ISE took a stance which reflected a fundamental belief in the fact that, with one-half an opportunity, teachers working with students could develop materials which would inherently have the best approach to creating effective educational returns for their students.

Granted, the traditional processes probably would have gotten the program further along the route to having completed sets of materials. However, while the procedure used was slower, we now know that it is essentially correct and justified. In appendix one, are representative examples of the material now ready for national publication -- all of which eminates from the TCCP. This material has been viewed and reviewed by many of those educators from that small community of curriculum developers, by educational materials publishing houses, by teachers not using program methods, and by reputable persons working with educational theories and practices. All of them agree that this material represents a new, exciting and substantive deviation from the more traditional content matter.

More important, however, is the fact that this interest has produced a marked effect upon the new authors. That is, the involved teachers have developed a strongly positive attitude towards their merit as teachers and educators, and towards their capabilities to perform a far reaching service. No longer will they accept the notions that their contributions to higher education can only serve a temporary function and that their role must always be miniscule.

Therefore, this, the TCCP, will not be either their last or only effort to keep education alive and functioning on the local and national level. Moreover, the upward trend in the number of speaking and method demonstrations invitations received by TCCP teachers from traditionally emulated universities indicates that they create a national resource which can no longer remain undiscovered or untapped -- a resource which will not be totally spent with over use.

An additional phenomena is observed in the vertical movement of the initial administrators of the program. It is a phenomena worthy of note because it gives meaningful insight into the desire of Black colleges and universities to provide better educations for their students.

Almost without exception, the original directors of the TCCP have moved into positions of influence within their institutions or within other educational institutions and organizations. A number of these former directors have been elevated to positions of Associate Dean of their institution -- responsible for freshman studies programs, or basic studies, or general curriculum reform in the institution. One is now the President of his college, while another has been elevated to the Vice President of his. A third has become the Chairman of the Department of English in his college, and a fourth and fifth are now Associate Dean of the college and the Dean of Academic Affairs, respectively. Such vertical movement has been repeated again and again in the replacements for these former directors -- especially within the newer consortia. Moreover, this movement appears to be of single importance as evidence that predominantly Black colleges are deeply concerned about the educational programs they use. It also offers proof that, with proper support and latitude, these colleges will find more than optimum solutions to their educational problems.

IV. INVENTION, DEVELOPMENT, AND DISSEMINATION

Teachers need to try out ideas, see what happens, get feedback from other teachers, make revisions, and try again. In the process, the ideas get embedded in new instructional materials for students and teachers, new instructional practices, and new classroom formats.

A year constitutes the natural cycle for such work -- invention during the summer, tryout during the academic year, revision the following summer and new ideas introduced, further tryout the next academic year. After several years work, the new materials are ready for dissemination outside the program, both by publication and through demonstrations by experienced teachers.

A good-sized group of teachers is needed to achieve the initial impetus to start a project and to sustain it through the hard work that follows. Teachers work unnecessarily in isolation on teaching problems--isolated from their colleagues on the same campus and from teachers facing similar problems on other campuses. By bringing a number of teachers together, the Thirteen-College approach makes the work more exciting and creates a new colleagueship. Teachers can try out each others' ideas and share results.

The task of the teachers and others at the summer conferences is not merely to talk about alternatives to present practices in education, but to start creating the alternatives -- the selections of books, the new equipment, activities, tests, tapes, films, teacher's guides. Teachers get together to work on the actual stuff to be taught and try it out. Objectives are defined after the fact, not before. Teachers define what has been accomplished, rather than spend time on abstractions about what to do. They are willing to plunge right in on the basis of intuition.

Development of new course materials and practices poses its own questions of methods and strategy. To start with an entire course can be overwhelming -- and offering too much to other teachers who are looking around for other things to try. The Thirteen-College approach has concentrated initially on developing more manageable entities, units that may last for a few days or a month or so.

Singly or in small groups the teachers develop units, the groups working independently on different units but under the same roof. Units are then put together for a first approximation to a course. More units are developed than any one teacher can use and each makes his own selection. As experience accumulates, some units are developed further and put together in sequences; others are dropped. Finally, as the program moves

outside the initial development area, the materials, are made generally available through publication.

The influence of the program on the college campus also advances year by year. The local program try to involve chairmen of departments and directors of freshmen programs from the regular college in the new activities. The college president puts the directors of the programs into positions of greater influence on the campus, sitting with division chairmen, academic standards committees, with the status of an associate dean or vice-president. He presents the ideas of the teachers in this context. After several year, the Thirteen-College approach is adopted, in part or in it entirety, by a larger fraction of the host college.

V. THE EDUCATIONAL CHALLENGE AND SOME PROGRAM RESULTS

Socio-Economic Background of Students

One of the amazing facts about the youth who enter these colleges is that they have survived the educational and psychological maiming of a public school system which, historically and presently, is the antithesis of equal opportunity. However, even as survivors there is little comparability between these students and their counterparts who enter the predominantly white institutions of higher education. Consider the following socio-economic facts surrounding these students:

1. Students come from extremely poor families:

   18% come from families with less than $2000 per year income
   34% come from families with less than $3000 per year income
   51% come from families with less than $4000 per year income
   65% come from families with less than $5200 per year income
   78% come from families with less than $6200 per year income

   (The average family income for college youth nationwide is slightly more than $10,000 per year.)

2. Their parent's occupations are generally of lower status:

   47% of students responding (2181) have mothers that work as domestics
   48% of students responding (2384) have fathers that work as laborers or semi-skilled workers

3. Their families are generally large:

   The average student has three younger children still at home and at least one other relative living with the family

4. An unusually large proportion of students were raised by the mother only or by grandparents (32%)

5. Students generally come from rural or small communities:

   50% come from communities of less than 25,000
   75% come from communities of less than 100,000

6. Their parent's educational background is limited:

   51% of the mothers have less than a high school diploma
   55% of the fathers have less than a high school diploma
   (30%) of the fathers have only some grade school education)

These background characteristics when combined with the inadequacy of public schooling for Blacks in the South have created an educational dilemma. College is very important to these students:

> If for some reason their ability to continue in college was threatened, 82% of the students would try to continue or do almost anything to stay in school,

and their parents:

> 65% of the students felt their parents expected them definitely to attend college;
>
> 59% of the students felt their parents expected them to finish college as one of the best in their class;
>
> 63% of the students felt their parents would be very disappointed or upset if they flunked out of college.

Moreover, these students come to college for the best of reasons:

> 35% of the students feel that the most important aspect reason for going to college is to gain training necessary to help people;
>
> 13% in addition to the above number see college as a means to become a better person;
>
> 9% feel college will provide them a better chance to change the world.

However, their chances for survival in college would seem, on the face of it, very slim for both achievement and psychological reasons. The college entrance examination scores of most of these students (in this case the American College Testing Program) average a complete standard deviation below the national norms for entering college students and the heterogeneity (degree of individual differences) between these students is greater than would be expected at most colleges. Compounding this problem are certain psychological attitudes and traits the students bring with them. If the entire academic problem confronting the colleges was simply achievement level, the colleges could perhaps adjust the level of their teaching or provide remedial programs. But, many of the students bring with them, feelings of academic inferiority which lessen the chances of any traditional program having a large impact:

42% of the students feel that sometimes they just can not learn or are unsure of their learning ability;

33% of the students are unsure or agree that when they they get stopped;

70% of the students are unsure or agree that they would get better school result if the teachers went slower;

43% of the students are unsure or agree that people like themselves have more problems succeeding.

And although many of these students want to see themselves as adequate academically, when questioned on specific abilities, this tend to rate themselves considerably lower (this is especially true in the math and science areas).*

The combination of all of the factors surrounding the students provides the rationale for establishing an introductory college experience in the mold of the Thirteen-College Curriculum Program. The students do have a drive to succeed. They have survived high school and their grade performance in high school (70% of the students had a B average or better) indicates their willingness to attempt to meet standards of learning proscribed. They are not psychologically aberrant, but they do reflect the effect of a history of unequal opportunity and discrimination. Thus, as they enter and proceed through college, programmatically it makes sense to capitalize on these exhibited strengths rather than reinforce weaknesses for which they have no responsibilities.

This, then, is the context which the Thirteen-College Curriculum Program is confronted. The student backgrounds, abilities, feelings, and attitudes can not possibly be overcome in the typical, sterile environment of the traditional college classroom. This is most clearly represented by the high attrition rate in the predominantly Black colleges (65 to 70 percent over four years as compared to the national college average of about 50 percent over four years). While attrition losses in any college seem largely unnecessary, it is particularly tragic in these colleges which for years have been the only resource in the black community for moving back the boundries of ignorance and providing professional manpower for service to that community as well as the nation.

Against this context, the Thirteen-College Curriculum Program has resulted in early, marked, and positive differences between Program students and comparative groups of their peers in the same colleges and universities. Obviously, from a Program standpoint the results should be considered preliminary and tentative, but they are definitive for the first groups of students who began the program in the Fall, 1967 and who are now approaching graduation from college.

---

* These data are statistically representative of 7000 students from I.S.E. gathered data who entered 14 different predominantly Black colleges across the South over three consecutive years - 1967 to 1969.

Quantifiable areas where the Program students (Generation 1, entering Fall, 1967) have shown superior outcomes as compared to their peers include the following:

1. Retention in College -- more than 60% of the Program students who entered college in 1967 are approaching graduation or have graduated as compared to approximately 45% of the regular college students;

2. Performance in College — Program Student Grade Performance has generally been significantly better than regular college students (significance varies from $p < .01$ to $p < .05$);

3. General Verbal Abilities and Skills — Program students have shown consistently higher gains on a general test of verbal ability after both the Freshman and Sophomore years (significance varies from $p < .01$ to $p < .10$);

4. Increased Valuing of Independence -- Program students have shown marked, significant gains in this personality trait as compared to regular college students as measured at the end of both the Freshman and Sophomore years ($p < .05$ consistently);

5. General Ability Test Perfromance in Math-Science Areas -- Program students have shown significantly higher results on both Math and Science Sub-tests of the ACT after completing the Freshman and the Sophomore year;

6. Increased General Self-Concept Strength -- Based on factor analytic results, and statistical tests of the resulting factors, Program students have increased in general self-concept strength as compared to regular college students, and their self-concepts have more clearly differentiated than those of regular college students;

7. Higher Specific Course-Related Self-Concept Attitudes in Science Areas — Program students show higher mean self-ratings on knowledge and performance in Science areas.

8. Importance of Educational Contribution of Freshman Year -- Program students more typically perceived their Freshman year as academically helpful, more intellectually stimulating, and as a major factor in their successfully completing college than did regular college students.

From a Program standpoint, there is a clear interrelationship between these results; one which makes sense in terms of the general thrusts of the Program. However, since cause and effect are almost impossible to demonstrate in post hoc evaluative studies, the following discussion will begin with "real world" outcomes including retention in college and performance in college, then move to general and specific ability test results, and finally attempt to deal with personality and growth results which add explanatory value to the previous elements.

Retention in College and Grade Performance

Perhaps the most important question directed toward any program proporting to improve the chances of students from disadvantaged backgrounds is, "Does the approach result in greater numbers of students successfully completing their academic careers, or more specifically, graduating from college?". Based on this criterion alone, the Program initially appears to have served its purpose. As shown on the following Fact Sheet on Generation 1 Program students as compared with a random sample of their peers at the same institutions, greater than 60 percent of the Program students are in their senior year while only slightly more than 45 percent of the regular college students have reached the same point (See Fact Sheet). These results are conservative estimates and would probably be even more positive if it had been possible to maintain clear data on students transfering to other institutions to complete their college careers. The previous figures represent only those students who remained at the institution where they began college for four year period. Additional data on Program students indicates that at least an additional 10 percent transfered after the sophomore year to other institutions. Based upon general information about disadvantaged students in these colleges, it does not seem likely that as high a proportion of regular college students transferred to other institutions, but due to the way students drop out (just disappear) and the weakness of college records, there is no way to prove this hypothesis. Another hypothesis which will be tested upon completing our data files this summer is that proportionately more Program students graduated from college ahead of the normal four-year schedule than did non-program students. We know that at least five percent of the Program students have graduated already, but we cannot make final judgments until we receive final transcripts from the colleges this summer.

TABLE I

College Attrition: Program Students and a Random Sample of Regular Students, Entering TCCP, Fall, 1967

		Freshman Year		Sophomore Year		Junior Year		Senior Year
		Entering	Withdraw	Entering	Withdraw	Entering	Withdraw	Entering
Program	Number	1179	168	1011	201	810	73	737
	Withdrawal (%)*		14.2%		19.9%		9%	
	Continuing (%)	100%		85.8%		68.7%		62.5%
Regular	Number	839**	248	591	155	436	42	394
	Withdrawal (%)*		29.6%		26.2%		9.6%	
	Continuing (%)	100%		70.4%		51.9%		46.9%***

* Based upon the number continuing for each year independently

** ISE collected entering data on more than 2000 regular college students; a 33 percent stratified (by college) random sample was then collected for continuing assessment purposes.

TABLE II

Comparative Grade-Point Averages: Program Students and Regular Students Entering the Senior Year

Continuing Grade-Point-Averages#

		Freshman Year 1st Term**	Freshman Year 2nd Term**	Freshman Year Total**	Soph. Year Program Courses	Soph. Year New-Program Courses*	Cumulative For Program Courses	Cumulative Through Soph. Year**	Junior Year Total	Cumulative Through Junior Year**
Program N=716	Mean	2.55	2.56	2.55	2.58	2.38	2.55	2.50	2.41	2.49
	S.D.	.61	.64	.61	.69	.68	.58	.54	.69	.53
Regular N=379	Mean	2.14	2.19	2.16	----	2.33	----	2.29	2.41	2.36
	S.D.	.68	.70	.61	----	.56	----	.49	.64	.48

A Four-Point Scale (A=4.00)
* Significant difference at less than .05
** Significant difference at less than .01
*** A poll of administrators suggests this is an overestimate. We have discovered serious problems in the verification of the 839 students as being identical through four years due to record keeping in some colleges. Some people different from the original 839 flowing into the sample may have inflated the percentage. A study of transcripts will clear up this problem.

Program students are doing generally better than their peers on college grade performance (See Fact Sheet). These grade achievement results are actually more significant than the averages suggest. First, the grade point averages for the experimental group include at least 15 percent more students than the control group; many of whom would not still be in college. Thus, a larger more heterogeneous or "less select" group is competing on equal terms with a smaller more homogeneous or "more select" group. Second, Program students made a major transition in moving out of the program after the sophomore year into the traditional college major sequences without losing their ability to compete with their peers whose traditional courses were geared to preparing them specifically for the major sequences. Third, the acadmeic rigor of the program courses and demand for greater student involvement and participation seem to have been the force necessary to allow students to continue in greater numbers and compete equally with their traditionally - prepared peers.

Program Outcomes Represented by Academic Test Performance and Changes in Personality

The impact of the Program on students can be also seen in various test results. Simply stated, the Program has demonstrated through these test results that it has an impact in developing student verbal abilities and skills, in increasing student valuing of independence, in a lowering of general anxiety, and in increasing achievement performance in the areas of math and science.

Program student performance, as compared to a sample of regular college students, has been significantly superior, sustanined over two years, and increasingly stabilized (that is, over time extraneous differences attributable to college attended or to sex, which initially confound the results, disappear). The simplest way to demonstrate these statements is to discuss the testing results at the end of the freshman year and then at the end of the sophomore year. These results are based upon replications of a multivariate analysis of covariance in which a variety of measured outcomes of Program students were compared to outcomes of students in the regular college program.

Although there were no random assignments involved and there were obvious differences in the entering characteristics of students across the different colleges, these differences were accommodated by using each student's pre-test scores (obtained before the start of the freshman year) to control entering differences on the same outcome performance variables and by also including measures of the students' socio-economic status as additional covariates of outcome scores. To control for differences attributable to either college or sex, the outcomes were blocked for purposes of analysis of program difference into a complex design which first partialled out remaining variance (after removing the effects of covariates) attributable to college attended, to sex of respondent, and then testing variance according to program or regular college experience.

The results at the end of the first year were significantly higher for program students than for non-program students on verbal skills, math and science sub-tests of the ACT, and important personality characteristics ($p < .01$). However, these results were confounded by an interaction between program and college ($p < .001$). This implied that the significant program effect was differentially attributable to different colleges. This is to be expected. At that time, the program was new which would contribute to the interaction, and it is recognized that even covariance cannot fully adjust comparisons when the population differences are as marked as those of selective entrance to different colleges.

The results at the end of the second year were based upon a reduced sample size attributable both to attrition from college and failure to return for post-testing. However, the overall "N" is large enough to make reasonable comparisons of performance and an analysis of pre-test scores between the measured second year post-test by the complex multivariate analysis of covariance model (previously described) were even more positive regarding the Program students. First, there were no significant interactions at any level indicating that the results had stabilized and that spurious differences attributable to college or sex were no longer important. Second, there was a main effect favoring the Program students for the entire matrix of dependent outcome variables ($p < .08$). Third, the outcomes carrying the greatest amount of weight in these overall results were on the Test of Verbal Abilities, the valuing of independence, and the Science Sub-test of the ACT. The Math sub-test of the ACT, from the univariate statistics also approach significance.

We are, of course, replicating this analysis approach across the continuing generations of students. The results of the second generation of students at the end of the first year are similar to the results of the first generation of students except that the interaction effects have decreased in magnitude. The results for the third generation of students (entering Fall, 1969) show no significant interactions and have a significant Program effect. This confirms our expectation that the Program itself would stabilize as time passes and teachers gain greater experience using the materials and instructional approaches.

Attitude, Personality, and Developmental Results

A great deal of effort has been placed on the accumulation of evidence concerning the effect of the program experience on student growth and development. Preliminary findings indicate that the students read more books, move proportionately beyond their numbers into campus positions of leadership, and indicate slightly higher attitudes toward their control over their environment.

While attrition as cited previously is obviously related to the values, rewards, and programs of each college, it is also partially a function of the experimental background this particular population of youth bring with them to college. Descriptive statistics accumulated by ISE provide evidence about the students' self-concepts which at time of entrance to college appear to lack clear differentiation and are weakly integrated. Self-concept refers to the student's perception of himself in relation to others on some objective or subjective standard such as ability in a subject or some particular interpersonal trait. An example of poor differentiation is represented by the student who is unable to distinguish among his abilities in different academic subjects. An example of lack of integration would be a student who sees himself as becoming a biologist, but who has never played around with a microscope. The development of a viable self-concept is largely a function of testing oneself behaviorally in different areas under supportive conditions.

At the time of entrance to college, student self-ratings did not clearly differentiate between abilities in academic areas other than on the basis of more rewarded experiences in the verbal areas and less rewarded experiences in the math-science areas. This lack of differentiation in the combinations of self-ratings at the time of entrance to college is also supported by the high relationship between student ratings on anxious interpersonal traits (wanting to be treated with understanding) and positive interpersonal traits (accepting of people at face value) indicating personal insecurity.

Data showed that the students generally rated themselves higher in such areas as "school ability," "intelligence," and "creativity" than in such specific academic areas as "knowledge of social institutions" or "ability in math." This lack of integration was also represented in the ratings of English and social science being rated more highly than math and natural science.

To a large degree, the self-concepts of the student on entering college are related to the passive, rigid educational environments of the schools students had previously attended. In these environments, it is difficult to gain the type of experience which allows an individual to clearly test himself in relation to others on educational abilities (as compared to the intensive testing which takes place in such areas as athletics). Thus, when the students enter college, it is all the more important that the college environment provide for more active testing of educational abilities in a positive atmosphere where they can be developed and understood by the individual.

ISE's data indicates that in interacting with the traditional college programs where the educational environment remains passive, centered around the instructor's lectures, the entering self-concepts showed little change in the course of the year. On the other hand, the program experience appears to

have served a developmental purpose by creating an education environment where the student is more actively involved with both instruction and materials, and where the threat of failure has been reduced. Data at the end of the year showed that there was an increase in strength of general self-concept. The specific areas were also more clearly differentiated. An anxiety self-concept remained but it was clearly differentiated from concern for others. The program students also tended to exhibit a stronger, clearer extraversion (social self-projection such as leadership, wanting to speak in front of groups).

These results agree with the reports from teachers, students and outside visitors. The program has been relatively successful in changing the educational environment, so that students are active participants in their education, rather than passive recipients. Activity in education contributes to the development of a viable self-concept, which, in turn, contributes to the student's ability to learn.

Attitudes of Graduating Seniors Toward Their Freshman Year

ISE is in the process of a major evaluation of the characteristics of seniors graduating from program colleges. Based upon some preliminary data gathered from seniors at three colleges where graduation has already been held, it appears that the former program students (Generation I, entering college Fall, 1967) feel much more positively about their early college experiences than do their peers who were exposed only to the traditional college programs. As shown on the following Table, program seniors tended to perceive their freshmen year (1) more as a model for the type of educational environment they would prefer throughout college, (2) as contributing more to their feelings that they could do college work and that they could figure things out for themselves, and (3) more greatly improving their confidence about their ability to do work in math and science. Concommitantly, the regular college seniors saw their freshmen year (1) as more impersonal and rigid, (2) as one in which the chief concern was to survive in order to get on to more interesting things, and (3) as one in which courses fell short of encouraging students to pose their own questions and develop their own viewpoints.

ISE views these results as hypotheses both about what the data on seniors will show across all of the program colleges and about the type of impact its program model should have on entering students. This impact should be represented by student products both more numerous and qualitatively different than their peers. College should be an intellectually exciting and rewarding experience in which the student is provided adequately the opportunity to learn and think, and to put these abilities to applied use. To accomplish this goal, it is necessary that the introduction to college demand the best actively from students, reward them for their strengths, and not denigrate and abuse them according to their weaknesses. Judging by the preliminary results accompanying the Thirteen-College Curriculum Program, the participating colleges may be more closely approximating these objectives. These results are a sampling of items from the first three of thirteen colleges to return exit questionnaires given to graduating seniors this June (1971).

ATTITUDES OF GRADUATING SENIORS TOWARD STATEMENTS ABOUT THE ACADEMIC IMPACT OF THEIR FRESHMAN YEAR IN COLLEGE FOR BOTH FORMER PROGRAM STUDENTS AND THEIR REGULAR COLLEGE PEERS*

ITEM: If I had my way, the rest of college would be more like my Freshman year.

	% Agree	% Disagree
Program:	53.33	46.67
Regular:	14.55	85.45

ITEM: Built up a strong sense that I could do college work.

	% Agree	% Disagree
Program:	86.67	13.33
Regular:	73.33	26.67

ITEM: Contributed to my feeling that I could figure things out for myself.

	% Agree	% Disagree
Program:	90.32	9.68
Regular:	88.33	11.67

ITEM: Showed me that I could do more math than I had previously thought possible.

	% Agree	% Disagree
Program:	48.39	51.61
Regular:	34.43	65.57

ITEM: Showed me that I could do more science than I had previously thought possible.

	% Agree	% Disagree
Program:	58.06	41.94
Regular:	49.18	50.82

ITEM: Course fell short of achieving the objectives of encouraging students to pose own questions and develop own viewpoints.

	% Agree	% Disagree
Program:	30.00	70.00
Regular:	43.64	56.36

ITEM: Chief concern was to survive an uninteresting year to get on to more interesting things.

	% Agree	% Disagree
Program:	25.81	74.19
Regular:	47.54	52.46

ITEM: Taught me college was rigid and impersonal; get it or else.

	% Agree	% Disagree
Program:	41.94	58.06
Regular:	50.82	49.18

* These percentages are based on a random sample of Graduating Program Seniors and Regular College Seniors from three colleges which held graduation exercises at an earlier date. (N=92)

Impact on Students and Teachers as Perceived by Teachers

Besides gathering statistics on students, teachers, and institutions, ISE has been collecting direct observations of classroom activities by teachers. At the end of each academic year for the first four years of the program, teachers have prepared reports on *what* is happening to the students and to themselves as compared to what has happened in the regular classes.

The reports range in length from 2 to 15 pages. The number of teachers writing reports each year has ranged from 100 to 140 teachers. Over four years, the result fills a shelf over four feet in length. It is impossible to sum up such writing in the same way one sums up extensive statistics. But ISE can list some of the principal themes that emerge from a reading of the reports and offer some supporting illustrations.

To be sure, there are some unfavorable comments about the program, but the favorable comments are in the great majority. Each year ISE has prepared collections of excerpts from the reports of some 150 to 200 pages which are then given to all teachers. Interested persons are welcome to read these reports or, for that matter, to read the original reports themselves, available in the ISE office in Washington, D. C.

Here are the themes and supporting illustrations. Some of the illustrations support several themes, so all themes are given first and then all the illustrations:

Students read more

Students participate more in the new activities

Students think for themselves more

Students exercise more initiative

Teachers enjoy teaching more

Teachers develop more open teaching styles

Teachers are more informal with students

*

"In all my years of teaching, I have not seen students devour reading materials so voraciously. The observation includes students in the course I taught in the regular program last year. No amount of cajoling has produced the volume of reading that I witnessed among the

students this year."

*

"Chamber Theater," one of the new activities of the project, was used quite effectively in helping students to enjoy a keener insight in works of fiction. First after reading James Joyce's "The Boarding House" and discussing the story and main characters, many of the students did not seem to fully understand the role played by Polly in her relationship with Mr. Doran. But after a group of students attempted to enter the world of these characters, by assuming their voices, using their language, and expressing their lines, the class readily did a reappraisal of Polly. Polly who had been seen as overprotected and somewhat helpless, became enticing, flippant, and unarming."

*

"Promoting student involvement via small groups, materials which required the students to do something, or games, and then directing the students to look for the mathematics, to discover the patterns, find the principles has had positive results both for me and for the students. Sometimes the students would come up with results of which I hadn't been previously aware."

*

"This incident happened so quickly that had I not been listening at the time, I would have missed it. We were discussing the light and dark reactions of photosynthesis. I had talked about one being a photochemical and another an enzyme activated, temperature sensitive reaction. One of the students commented, almost to himself, 'Hey, that's like a camera'. Another student asked what he meant and the first student explained, 'in a Polaroid camera, the exposing of film is sensitive only to light and independent of temperature, but how fast the film is developed, is temperature sensitive, since it is a chemical reaction?"

*

"Because of the flexible and malleable nature of the program which encourages free and sometimes heated exchange of ideas, students are more likely to question, defend or attack accepted or traditional ideas in a relaxed manner, free of the approval or censure of the traditional authoritative teacher figure. Many students commented that the course was entirely different from any they had been exposed to. Several stated that they were more confident in their own ideas, more conscious of their writing and more willing to try something different. On the other side, a small few complained of the 'weird' assignments as two called them as they required too much thinking."

"The response of students, the level of interest and involvement they have exhibited exist in open contrast to the 'silent' classes in the regular program and the courses which I taught before I entered the Thirteen College Program."

*

"In the Humanities, I think the most important teaching practice that I utilized was that of letting a topic spin itself out for as long as seemed valuable for the students. There was no attempt to cover the field, so it didn't seem to make much difference how much time we spent on a particular subject or piece, the only consideration being the students; how interested were they in what we were doing and how much did I feel they were learning?"

*

"Problems [in Mathematics] without answers are unheard of in the regular program. (Professors would be embarrassed to tears, in many instances, to be unable to supply an answer to a problem which they had assigned to a student.) Time to discover things for yourself is unheard of in the regular program. Ditto--time to do anything but manipulate formulas, and come up with answers. Our teachers in the regular program are required to 'cover' certain units whether their students are able to comprehend or not."

*

"This project has helped me to be a more relaxed teacher. I am more patient and understanding. The pupil-teacher relationship is closer. I have developed invaluable friendship. I can be tolerant enought to listen to the Beatles, Jimmy Hendrix, etc. I understand 'hip' jargon enough to communicate during casual conversations with students. This I could not say a year ago."

*

"The lack of restrictions has allowed for a freedom in the classroom which I never thought possible. The project permits a response on the part of the student which tends to show that education (learning) can be interesting. The informal atmosphere of the classroom has disposed of the idea that the teacher is always right and that her interpretation of a work is the only one; now with the exchange of ideas as opposed to a staunch lecture the student has much more of a voice in his learning process."

*

"The more informal atmosphere I found extremely appealing, for I am more informal by nature. Students enjoy working independently and in smaller groups; sometimes, they were scattered here and there while

preparing for class presentations, some in the library, some in the outer lobby with the tape recorder, and some in the classroom."

*

"At first I thought that they did not like him [Golden] because they didn't understand the nature of humor and satire in spite of the fact that by the time that we reached Golden selections we had been involved in some spontaneous discussion of such topics as how humorists and satirists achieve their effect, what are their purposes, and tone in humor and satire. I was forced to change my opinions when a student or two brought in samples of humor and satire that they had written without being asked. Later, almost all students got into the act of writing their own and their peers generally liked what they heard."

*

"Another student having caught the pattern-seeking fever wrote up an additional pattern she discovered when she arranged a deck of playing cards in order (the number of the card equals the sum of the card and the values of the preceding cards. This was with four of each card. She generalized to a deck with N of each kind of card.) All this she did on her own. I asked her if she would like me to give her some kind of credit (i.e. for an outside challenge), but she said she wouldn't have done it if she had been thinking about grades and refused."

*

"I have become increasingly aware of the many shortcomings of the traditional English program. Having taught in the regular program for six years, I was naturally a bit apprehensive, concerned and skeptical at first about the de-emphasis on the teaching of formal grammar, but after two years in the program I am convinced that memorizing grammar rules and doing exercises and drills do not necessarily make students proficient at writing."

*

"In two years the Program has succeeded in orienting me to a different style of teaching [Mathematics] so much that I find myself unwilling to return to the lecture. It has come about that even when I am teaching a class outside of the program or am addressing any group which is not overly large, the most natural approach for me is to use some means or devices to permit my audience to become involved, to help them discover the point I wish to make. The discovery method has become part of my thinking process."

V. GROWTH OF THE PROGRAM

In 1967, thirteen colleges introduced the program to their campuses. The Colleges and Universities are:

Alabama A. & M. College
Bennett College
Bishop College
Clark College
Florida A. & M. University
Norfolk State College
North Carolina A. & T. State University
Lincoln University
Talladega College
Jackson State College
Tennessee State University
Southern University
Voorhees College

Each of the colleges had a program staff consisting of one director, one counselor, and eight (8) teachers, (two for each of the four first year curriculum areas) with the exception of Bennett College, which had a program staff composed of one (1) director, one (1) counselor, and four (4) teachers, (one for each of the four first year areas). Each college's program served one hundred (100) students; with the exception of Bennett College which enrolled fifty (50) students.

In the second year, 1968, the sophomre courses, Humanities and Philosophy, were added to the program. The program staff of each colleges (Bennett was again excepted) was enlarged to fourteen persons, by the addition of two teachers, one for the Humanities and one for the Philosophy courses. Each program's student enrollment increased to two hundred students; one hundred students in the freshman courses and one hundred students in the sophomre courses.

In this same year, Mary Holmes Junior College became the fourteenth college to join the program. In the years of 1969 and 1970, as the results of the program (reported elsewhere in this report) and the program itself became more widely known, the inital colleges began to implement the program. Greater numbers of freshmen students were permitted to enroll in the program courses and a greater number of the college faculty was oriented to the program and began to utilize the teaching style of the program as well as its materials. Concomitantly, more colleges and universities became interested in the program and adopted it.

In 1970, five colleges and universities (noted in Table I) in the form of the Five College Consortium, adopted the program. This year, nine more colleges (noted in Table I) adopted the program. Eight of these nine colleges formed the Eight College Consortium and one, Fayetteville State University, joined the Five College Consortium.

Tables III and IV present summaries for academic years 1971-72 and 1972-73 of the colleges and universities utilizing the program, of the number of faculty involved, and of the number of freshmen enrolled in the program.

It is significant that the program has grown so rapidly: participating colleges and universities: 13 (1967) to 28 (1971) to 35 (1972); participating faculty members 100 (1967) to 456 (1971) to 627 (1972); freshmen enrollment in program: 1250 (1967) to 8900 (1971) to 12,567 (1972).

It is also particularly important to note that the program has a successfully proven original premise in all of the various types of institutions which constitute the predominantly Black colleges. The program has achieved its objectives in public and state supported colleges and well as in private church affiliated colleges and private other affiliated colleges. The TCCP has been effective in colleges that have a rather select clientele as well as for those that have had a policy which closely approximates an open-door admission.

TABLE III

Projected Faculty and Student Enrollment in 13-College Curriculum Program
for Academic Year 1971

College	Physical Science	Biology	English	Social Science	Math	Philosophy	Humanities	Total Faculty	No. of Students in Program (Freshmen Only)	No. of Students in Freshman Class (Approx.)
Jackson State 1/	4	1	7	4	3	2	2	23	500	1,400
Florida A & M 1/	3	4	9	5	3	2	2	28	400	1,200
Tennessee State 1/	2	2	6	4	6	2	2	24	300	1,200
North Carolina A & T 1/	2	2	8	4	6	1	2	25	500	1,400
Alabama A & M 1/	3	2	6	6	4	2	2	25	400	800
Bennett 1/	1	1	4	1	1	1	2	11	150	150
Bishop 1/	3	2	6	4	4	2	2	23	500	500
Mary Holmes 1/	2	1	3	3	3	0	0	12	300	300
Lincoln 1/	1	1	2	2	-	1	2	7	100	300
Talladega 1/	1	1	3	2	3	1	2	13	150	150
Norfolk 1/	3	4	9	2	9	2	2	31	1,000	1,400
Voorhees 1/	1	0	4	3	3	1	1	13	150	200
Southern at Baton Rouge 1/	5	4	9	7	10	2	2	39	1,800	2,400
Clark 1/	1	1	3	3	2	2	2	14	300	300
St. Augustine's 2/	1	1	2	2	2	1	1	10	100	250
Elizabeth City 2/	1	1	2	2	2	1	1	10	100	300
Southern at Shreveport 2/	1	1	2	2	2	1	1	10	150	250
Langston 2/	1	1	2	2	2	1	1	10	100	250
Texas Southern 2/	1	1	2	2	2	1	1	10	100	1,000
Fayetteville 2/	2	2	3	3	3	0	0	13	200	500
Jarvis Christian 3/	2	2	3	3	3	0	0	13	200	250
Southern-New Orleans 3/	2	2	3	3	3	0	0	13	200	300
LeMoyne-Owen 3/	2	2	3	3	3	0	0	13	200	200
Virginia Union 3/	2	2	3	3	3	0	0	13	200	250
Grambling 3/	2	2	3	3	3	0	0	13	200	1,400
Alcorn A & M 3/	2	2	3	3	3	0	0	13	200	1,000
Bethune-Cookman 3/	2	2	3	3	3	0	0	13	200	350
University of Md.-Eastern Shore 3/	2	2	3	3	3	0	0	13	200	250
TOTAL	55	48	116	87	94	26	30	456	8,900	18,250

1/ 13-College Consortium 2/ 5-College Consortium 3/ 8-College Consortium

TABLE IV

Estimated Faculty and Student Enrollment in 13-College Curriculum Program for Academic Year 1972-73

College	Total Program Faculty	Program Freshman Enrollment	Total Freshman Enrollment
Jackson State 1/	25	1,000	1,500
Florida A & M 1/	35	600	1,100
Tennessee State 1/	20	600	2,000
North Carolina A & T 1/	37	900	1,333
Alabama A & M 1/	25	700	1,100
Bennett 1/	15	150	200
Bishop 1/	20	300	400
Mary Holmes 1/	10	250	250
Lincoln 1/	12	100	300
Talladega 1/	12	200	200
Norfolk 1/	47	1,000	1,600
Voorhees 1/	20	350	350
Southern at Baton Rouge 1/	56	1,600	2,250
Clark 1/	23	296	357
St. Augustine's 2/	12	198	547
Elizabeth City 2/	10	200	263
Southern at Shreveport 2/	13	202	782
Langston 2/	13	275	348
Texas Southern 2/	13	251	924
Fayetteville 2/	25	538	538
Jarvis Christian 3/	11	109	209
Southern - New Orleans 3/	20	400	652
LeMoyne-Owen 3/	8	125	300
Virginia Union 3/	16	197	330
Grambling 3/	24	386	1,500
Alcorn A & M 3/	11	300	663
Bethune-Cookman 3/	16	172	372
University of Md-Eastern Shore 3/	10	119	240
TOTAL	559	11,518	19,608
Bowie State 4/	8	100	600
Shaw at Detroit 4/	10	150	300
Coppin State 4/	8	150	450
Lincoln-Jefferson City 4/	8	125	500
Mississippi Valley State 4/	13	200	350
Houston-Tillotson 4/	8	109	197
Livingstone 4/	13	215	235
TOTAL	68	1,049	2,632
GRAND TOTAL	627	12,567	22,240

1/ 13-College Consortium 2/ 5-College Consortium 3/ 8-College Consortium
4/ Consortium for Curricular Change

HE 004 904

The Thirteen-College Curriculum Program (TCCP) is a massive, joint effort by a group of black colleges and the Institute for Services to Education (ISE) to develop active, relevant, and workable educational programs for students enrolled in predominantly black colleges. The TCCP was initiated the summer of 1967 by the Thirteen-College Consortium (TCC). The TCCP has subsequently been adopted by additional groups of colleges. This document presents a progress report of the TCCP, first by explaining the TCCP, then describing its effort to use teachers to develop their own class materials, and the effort of the TCCP to disseminate teacher's evaluations and attitudes of the program. The fifth section contains program results, including: socio-economic background of students, retention in college and grade performance; program outcomes represented by academic test performance and changes in personality; attitude, personality, and developmental results; attitudes of graduating seniors toward their freshmen year; and the impact on students and teachers as perceived by teachers. The growth of the program is discussed in the sixth section. Appendices include a catalogue of materials, a description of the 1971 summer workshop, and cycles of development of the TCCP. (Author/PG)

ID:*TCCP, ISE

*Higher Education; *Negro Institutions; *Educational Programs; *Curriculum Development; *Teacher Attitudes; Dropouts; Freshmen; Negro Students; Teacher Developed Materials; Consortia; Reports

ERIC JOURNAL ARTICLE RESUME

ERIC ACC. NO.

CH. ACC. NO. | GROUP CODE

Francis, John B.;

AUTHOR

TITLE

JOURNAL CITATION

DESCRIPTORS

IDENTIFIERS

ANNOTATION

EDIT NOTES

NIE FORM 5, 10/73 (Replaces OE FORM 6027, 10/69)

APPENDIX A: CATALOG OF MATERIALS

This catalog lists the materials published so far and some still under development. The materials are in the form of Student Manuals and Teacher Manuals. In some cases the same Manual serves for both students and teachers. For teachers involved in preparing these materials, the effort represents a significant addition to their professional activities and careers.

The manuals are 8 1/2" x 11" in size, vary in length from 25 to 500 pages, and include diagrams and illustrations as appropriate. Some manuals are duplicated from typewritten copy, other manuals are duplicated from copy set in type.

The manuals introduce the themes of the course, organize the materials, and describe student activities. They include excerpts from books, articles, songs, poems, and plays. They offer anecdotal accounts of how things have actually worked out in classrooms. They list and describe all the other materials upon which the courses are based: paperback books; tape and tape recorders; records and record players; slides and slide projectors; computer terminals; laboratory equipment; and a variety of duplicating machines to duplicate the additional reading materials, reports by teachers, and work by students.

All materials listed in this catalog are printed at cost. But the price does not depend on the size of the manual alone. Materials for which smaller orders are expected, such as the Teacher Manuals, cost more per page because of the smaller run.

ISE makes no profit in publishing and distributing these materials.

Prices are subject to change without notice, depending upon changes in the cost of printing.

ENGLISH

The curriculum materials for the English Course consist of four sequences of units developed around the themes of Responsibility, Love, Choice, and Self and Alienation. Each sequence has a manual for students and one for teachers. Each manual contains: (1) a collection of selected essays, poems, short stories and excerpts from plays and novels; (2) an explanation of Chamber Theatre Technique with a sample script; (3) writing exercises; (4) suggested topics for expository and creative writing; (5) questions for class discussion and/or independent research; (6) recommended group activities; (7) topics for independent research projects; and (8) representative samples of work done by students previously in the Thirteen College Curriculum Program.

Each sequence is approximately equivalent to one semester's course of study. Each sequence, provides a variety of works: simple, complex; classical, modern, representing all genres. The Teacher Manuals for each sequence have built into them varied pedagogical approaches which rely heavily upon the use of a student-centered classroom with a flexible, inductive teaching style. The materials are, therefore, designed to stimulate students to question, challenge, discuss and ultimately to write and read more widely and more effectively.

Responsibility: Student Manual	167 + vii pp.	$2.25
Responsibility: Teacher's Manual	195 + vii pp.	$4.20

This sequence of units explores the theme of responsibility to self, family, community, state and God. It is divided into four sections: Humor and Satire; Language and Speech-Drama; Language and Speech-Fiction; Ideas and Their Expression. Humor and Satire investigates the various forms of humor in depth. It looks at oral as well as written forms of humor which range from a recording of Bill Cosby's Noah to Jonathan Swift's "A Modest Proposal." Language and Speech - Drama examines language, both oral and written as reflected in drama. Language and Speech-Fiction examines language, primarily as it is reflected in fiction. Ideas and Their Expression examines the relationship between ideas and action, through examining selections ranging from Imamu Ameer Baraka (LeRoi Jones) to Plato.

Love: Student Manual	est. 205 pp.	$2.25
Love: Teacher's Manual	272 + vii pp.	$4.20

This sequence, which consists of four sections - Love, Sacred and Profane; Passion; Love and Society, Love and the Family examines through literature, film, records, and experience, the most primal of man's emotions, love. Special emphasis is placed in this sequence upon the skills of descriptive writing, analysis, interpretation of poetry, and the comparison of western and non-western attitudes toward love and marriage.

Choice: Student Manual	161 + xvi pp.	$2.25
Choice: Teacher's Manual	96 + xv pp.	$2.50

While there is special emphasis placed upon giving the student experience in manipulating language through the devices of textual puzzles and various other ISE techniques, the literature which comprises this sequence has been selected and arranged in units that may assist students in an examination of the essential elements of choice. The genres represented in the sequence range from essays to novels and include authors such as de Maupassant, Ibsen, Lonnie Elder, James Baldwin, Dreiser, Claude McKay, Leopold Senghor, Paul Lawrence Dunbar, Walt Whitman and Dylan Thomas.

Self and Alienation: Student Manual	In Preparation	
Self and Alienation: Teacher's Manual	est. 185 pp.	$3.50

Emphasis in this sequence is placed upon helping students to develop positive self-images through the examination of the concept of "voice" and the idea of alienation, beginning with man's origins and progressing on through his life to death. Works in the sequence include African myths and tales; Biblical myths, Western tales; essays by James Baldwin, Albert Camus, excerpts from biographical writings of Frederick Douglass, Malcolm X, Ann Moody and Franz Kafka; excerpts from the plays of Shakespeare, Ibsen, Albee; and the poetry of Hughes, Kgositile and Baraka (Jones).

MATHEMATICS

The teaching of mathematics in college typically takes the subject as already invented and developed, as abstracted and generalized from its sources in imagination and the physical world. This is true for courses in particular topics, such as trigonometry and differential calculus, designed for students majoring in some science or mathematics. It is also true for courses in "Fundamentals," covering selected topics in geometry, algebra, and so on, designed for students seeking to satisfy their graduation requirement in mathematics.

The present approach, which is designed for students grouped together from both categories, seeks to engage the student and teacher in the initial process of abstraction and generalization, and in the invention of mathematical systems. Topics are selected from the familiar freshmen courses of both kinds and new topics are added. The purpose of the course is not only to impart skills and facility but also to give students a better feeling for the intuitive and creative elements in mathematics.

There are 14 units for the course, more than any one teacher can use. Each teacher makes his own selection depending upon what he and his students are interested in.

The materials listed below are Teacher Manuals, but the booklets frequently include material that can be handed directly to students.

It's A Computerized World: Basic Language for GE Time-Sharing System	48 + vi pp.	$1.25

Giving Instructions in English; Giving Instructions in Basic; Translating Instructions from English to Basic; Conditional Control Statements; Subscripts; Appendix A (Programs Used in Unit); Appendix B (Handouts Used in Unit); Appendix C (Analysis of Some Computer Programs); Appendix D (Programs Used in other Units).

Base Numeration Systems and Introduction to Computer Programming (Fortran)	57 + iv pp.	$1.25

Base Two, Base Four, and Base Eight Numeration System; Designing a Simple Computer; Introduction to Elementary Fortran.

Topics in Mathematics	235 + vi pp.	$4.00

This unit is a collection of materials and teaching strategies which offer useful motivation for developing some important mathematical ideas The intuitive approach is stressed throughout. The procedures stimulate the imagination and help build self-confidence by the "doing" of mathematics. In using this approach, the teacher is urged to restrain himself from telling

the formulas prematurely. Informal proofs are generally acceptable when they provide convincing arguments during class discussion.

Geo-Board (Area and Pythagorean Theorem); Arithmetic Numerals; Balance Statements (Linear Equations); Perfect Numbers (Including 1/2, 1/3,..., Perfect Numbers); Hidden Combinations (Logic Game); Two Students Walk (Coordinate Graphs); Arrays, Polynomials and Finite Differences; Chain Loop Puzzle (Polygons); Over the Edge (Series); Switches and Batteries (Mathematical Model for Physical Situation); Map Coloring (Euler's Theorem); Roll Along With Galileo (Area); The Euler ø Function; Short Investigations; Arrays of Squares and Cubes, Tower of Hanoi Puzzle, Peg Puzzles, Spirographs and GCD's Box Problem, One Hundred Dots (Combination), Squares and Cubes, Array of Triangles, 3-D Tic-Tac-Toe, Handcuffed Prisoners, Bees and Rabbits and One-Way Streets, Kongisberg Bridges, Tree Graphs, Friendship Diagrams, Networks, Limit of a Sequence, Games.

Sets and Logic — 81 + vi pp. — $1.25

The Idea of Sets; Forming Sets; Universal Sets and Empty Seats; New Sets From Old Sets; Differences and Complements of Sets; Cartesian Products; Equivalent Sets; True-False Statements; Logical Statements; Compound Statements; Related Statements; Truth Tables; Logical Arguments; 0 and 1 as an Alternative to the T and F notation; Comparing Properties of AND and OR with PLUS and TIMES: Quantifiers; Indirect Proof.

Topics in Number Theory: The Number Game — 49 + vi pp. — $1.25

Figurate Numbers; Prime Numbers; Divisors; Greatest Common Divisor; Congruences; Guess My Number; Pythagorean Systems; Linear Diophantine Equations; Euler's ø Function.

Tools and Concepts — 38 + vi pp. — $1.25

This unit is designed to provide an enrichment opportunity for students to develop tools and concepts which are used in various areas of mathematics Arithmetic progressions, geometric progressions and mathematical induction constitute the first part of the unit. In these sections, several short investigations are described which can give students adequate introductions to these topics. The latter sections of the unit introduce students to the use of the slide rule and logarithms. Students are encouraged to make their own slide rules for both addition and multiplication. For the latter, they are encouraged to make several logarithmic slide rules using various bases. We feel that such activities give students a better understanding of the exponential principles involved.

Probability and Statistics — 42 + vi pp. — est. $1.25

Elementary Combinatorial Principles (Multiplication Principle, Permutation, and Combination); Intuitive Approach to Probability (Meaning of Probability,

Mutually Exclusive and Independent Events, Sample Events, Sampe Space and Probability Curve); Intuitive Approach to Statistics (Meaning of Random Events, Selecting a Random Sample, Binomial Distribution, and Normal Distribution).

Similarity and Theory of Trigonometry of Triangles — est. 85 + vi pp. — est. $1.25

Traditionally, a trigonometry of the right triangle is introduced by the memorization of the six trigonometric ratios. Special attention is given to the fact that these six trigonometric ratios depend on the measures of the sides of the triangle. Not as much attention is given to the fact that they depend as much upon the sizes of the angles involved. The fact that similar triangles have equal corresponding ratios plays a most significant role in the study of trigonometry. It is in this light that the writing committee developed both a trigonometry for right triangles and a trigonometry for 120°- triangles.

Similarity; The Trigonometry of Right Triangles; The Ledet Trigonometry; 0-Ledet (Right Triangles), 1-Ledet (120° - Triangles), ... N-Ledet.

Models — est. 36 + vi pp. — est. $1.25

Models (From Attribute Blocks to the Tower of Hanoi) and Their Descriptions; Other Puzzles and Games; Addresses of Companies for Orders; Price List for Models; Book List (Reference Books).

Finite Geometry — est. 16 + iv pp. — est. $ .75

What is in the Box (Models of Finite Systems); Independence of Axioms; Consistency and Categoricalness; Some Selected Exercises.

Graphing — est. 56 + iv pp. — est. $1.25

Coordinate Tic-Tac-Toe; Linear Graphs; Loonie Graphs (Analytic Geometry); Relation and Function (Elementary); Empirically Derivable Mathematics (Guessing Functions).

Functions — est. 41 + iv pp. — est. $1.25

Function Machine; Set notation; INTO and ONTO Functions; Graphs of Relations and Functions; Operations and Functions; Composite Functions

Number Systems — est. 50 + iv pp. — est. $1.25

The Number Concept; Numbers and Sets; Real Numbers; Periodic Decimal Fractions; The Magic of Nine; Series and Sequences; Partial Sums; Numbers are in Good Shape; Fibonacci Numbers; Soul Sequences and Series.

Consumer Mathematics

Consumer Credit (Your Credit, Personal Bankruptcies, Your Credit Slip, Credit Rating, Cost of Credit, Borrow Money or Use Charge Account, Interest Rates on Installment Contracts); Money Management (Budgeting, Door-to-Door Salesman, Typical Budget, Stretch Your Money); Preparing For Your Future (Fixed Dollar Investments, Variable Investments); Projects and Community Activities; Consumer Credit Pre-Study Inventory Test.

In preparation,

One manual has been developed specially for students.

TCCP Mathematics Student Manual - Problem Book	174 pp. x VIII	$2.50

SOCIAL INSTITUTIONS

The teaching of social science in college typically begins either with some grand survey of the subject -- the development of mankind -- or it begins with an introduction to one of the disciplines of the field--economics, sociology, history, geography, anthropology, political science, psychology. The two approaches have one thing in common, however. In both cases the work is based on questions raised by other people and on the answers found by them.

The present approach has developed themes which embrace several of the traditional disciplines but which are not so grandiose in design as the usual survey course. The approach seeks to relate work in class to the student's own experience, to what he is familiar with, to what he is physically close to, and to let students build their own explanations and theories through exercises starting from this base. The course also investigates the views of recognized scholars on various topics, but in addition considers why different scholars hold different views about the same phenomenon; how their sources of support and prestige, their closeness or distance from a situation, affect their views.

The course consists of three sequences, each of which has a manual for students and one for teachers. Each manual contains selections from magazines and books, both non-fiction and fiction. The manuals also contain suggestions for further reading and various activities, such as simulation games and street corner research.

The traditional class consisting of lecture periods and the reading of one or two staid textbooks is essentially erased. Instructors encourage open discussions, panels, out-of-class work by small groups. Students read from many sources (as many as 35 for a Sequence). In addition, since this new program embraces such a variety of fields, outside authorities on differing topics (i.e., a Black Muslim or a Viet-Nam Veteran) are brought in and extensive use is made of movies, film strips, tapes and records.

The Basis of Community and Society: Student Manual	72 pp.	$1.80
The Basis of Community and Society: Teacher Manual	162 pp.	$6.50

This sequence of units examines associations in the student's experience outside the classroom -- family, home town, college town, friends, classmates. It considers the relationship of these associations to larger institutions. Are the smaller associations microcosms of the larger?

The Structure of Community Control: Student Manual	In preparation
The Structure of Community Control: Teacher Manual	In preparation

This sequence asks the following questions: who has power over whom in schools, colleges, churches, and similar institutions? How in these institutions is power manifested and support mustered? These questions are also explored for neighborhood government and for federal, state, and local governments.

The Black Experience: Student Manual	est. 70	est.	$2.25
The Black Experience: Teacher Manual	est. 90	est.	2.85

This sequence examines African civilization at two key points; before colonization and today. It also examines how in America, in the 19th and 20th centuries, black protest and accommodation were played out in family, church, political parties, and pressure groups.

PHYSICAL SCIENCE

Each of the seven units is designed to be self-contained. It starts with a fundamental concept and develops it in a spiral fashion through a hierarchy of levels. Each level contains the development of at least one fundamental idea from empirical data obtained in the laboratory, the demonstration of the utility of the concept, and a natural termination point. A given unit may be interchanged in a course sequence with almost any other; consequently, a teacher constructs his course around the sequence of units that best suits his own interests and the background of his students.

The individual booklet, however, is not self-contained or complete. Its effective use is strongly dependent on students' own input and individual response. Laboratory exercises are designed to place students into working contact with physical principles that naturally lead them to ask questions and discover for themselves the hidden laws. Physical concepts and statements of physical laws are arrived at in the laboratory after careful experimental investigation of physical phenomena and are not given at the outset of experiments. Consequently, statements of the physical laws to be studied do not appear in the workbooks. They are derived from laboratory activities. It is essential, then, in the use of the workbooks, that supplementary readings from several sources be relied on for a background of the history, development, and application of the concepts encountered in the course of our experimental studies.

Most of the units include both a Student Manual and a Teacher Manual. In some units, however, the same booklet serves both as Student Manual and Teacher Manual.

Nature of Physical Science: Student Manual	65 + xi pp.	$1.25
Nature of Physical Science: Teacher Manual	87 + viii pp.	$3.25
Inaccessible Die Systems (Apparatus)		.75 ea.

The student begins by using his everyday experiences to make his own observations, gather his own data and develop his own scientific method. The experiments move from familiar intuitive type problems requiring little or no use of measuring devices to the more abstract, typically "scientific" problem where measurement and analysis of numerical data is a crucial part of the experiment. The patterns that are established in this unit are repeated systematically in the others. Thus, the universality of the methods of science are illustrated by showing the development of the concepts in the other units to be variations of a fundamental theme.

Chemistry, Part 1 - A Macroscopic View Student Manual	51 x vi	$1.25
Chemistry, Part 1 - A Macroscopic View Teacher Manual	69 + xiv	$2.00
Chemical Slide Rule (Apparatus)		$1.50 ea.

This unit develops three major concepts: (a) chemical elements are the primary substances of which all other substances are composed; it also points out the value of the general concept of an 'elemental' substance, which is a recurring theme in science, (b) a knowledge of the patterns of chemical combination of the elements is an essential ingredient to the theory of chemistry; it enables us to predict the possibility of the outcome of chemical reactions, and (c) the property of chemical activity is an empirical measure of the relative combining tendencies of elements that are in the same chemical class. A knowledge of this property of chemical elements enables us to determine the probability of the outcome of chemical reactions.

Chemistry, Part 2 - A Microscopic View Student Manual and Teacher Manual	85 + x	$1.75
Chemistry, Part 3 - An Introduction to Organic Chemistry: Student Manual & Teacher Manual	57 + xii	$2.00

Organic Rummy Cards (set of 90 cards)	$2.20 ea.
Organic Chemistry Information Cards (set of 27 cards)	$1.00 ea.

This unit consists of four chapters: I, General Introduction; II, The Chemical Bond, covering the structure of the atom, the ionic bond, and the covalent bond; III, The Patterns of Organic Chemistry, covering molecular models, extracting patterns from experimental data, hydrocarbon classes; IV, The Role of the Chemical Bond in Determining Chemical Properties, covering chemical activity, isomers, and experimental determination of molecular structure.

Conservation Laws - Momentum and Energy: Student Manual	55 + x	$1.25
The Gas Laws and Kinetic Theory: Student Manual and Teacher Manual	65 + xv	$1.50

This unit is divided into three sections; each sheds light on a different aspect of the properties of gases. The first section is devoted to an experimental study of the macroscopic properties of gases. In this section, three basic experiments are outlined to provide guidelines for an experimental study of the relationships between the parameters of a gas. The objective of each of these experiments is to provide information from which we can obtain mathematical expressions describing those relationships. In each of these investigations several gases are studied to assure that the relationships discovered are properties of the gaseous state in general and not a

feature of a particular gas. In the second section we seek a more fundamental understanding of these laws by studying the Kinetic Theory. In that study the elements of the Kinetic Theory of Gases are introduced and their logical consequences pursued. In the final section, a composite of the three macroscopic laws, called the Ideal Gas Laws, is compared to the experimental results of gases, and some of the limitations of the gas laws are pointed out.

Light: Student Workbook and Teacher Manual — 63 + xiv — $2.00

This unit consists of four chapters: I, Historical Views; II, A Closer Look at Waves and Particles; III, Geometrical Optics; IV, Physical Optics. Experiments include work on white light dispersion; colored objects; a chemical reaction produced by light; and determination of the wavelength of light using the double slit interference method.

BIOLOGY

The usual freshman course is based on a phylogenetic consideration of the structures of animals and plants, as well as their embryology and development, their ecological distribution, and their economic importance, all mainly as facts to be memorized. The present course is based on a fresh selection of topics developed out of the interests of students and teachers. It emphasizes helping the student experience some of the ways in which biologists work, gather data, and reason about organisms and their environments.

The course consists of eight units of study and 42 laboratory experiments geared to the topics. There is a Teacher's Guide for the eight topics and both a Student Workbook and Teacher's Guide for the experiments. In a one semester course, the teacher selects about five units to be taught for about three weeks each, with Units 1 and 3 considered as the basic units of the course.

Teacher's Guide to Classroom Discussions for Biology	409 + xi pp.	$13.00

This work offers a general introduction and the eight units of study. Points are illustrated by samples of classroom dialogue and activity. The contents include:

Introduction, Principles for Structuring the Course (approaches to the inductive presentation of the concepts to be conveyed); 1, Nature of Science; 2, Evolution (Theories and evidence of evolution above the species level); 3, The Cell (Evolution of the cell; cytology by light and electron microscope); 4, Reproduction, Growth, and Development (Animal and human); 5, Genetics (Inheritance; probability, chromosal behavior, chemical basis of heredity); 6, Metabolism and Regulatory Mechanisms (Nutrition; systems supporting cell environments); 7, The Variety of Living Things (Systems of classifications; groups of organisms); 8, Ecology (Abiotic environment; species and the biotic environment).

Laboratory Activities for Biology: Student Manual	260 + viii	$3.00
Laboratory Activities for Biology: Teacher Manual	180 + xii	$6.50

The experiments, which are geared to the eight topics, include the following:

1, What is an experiment? Scientific Reports; 2, Weighing and Measuring; 3, Diffraction of Light into its Spectrum; 4, The Microscope and Microscopy; 5, Sterilizing and Sterile Technique; 6, Effect of Ultraviolet Light Radiation on the Color of Serratia Marcescens; 7, Buffers and Indicators; 8, Coacervates and Emulsions; 9, Water Content of Various Tissues and Cells; 10, Cell Types;

11, Types of Foods Found in Cells and Tissues; 12, Diffusion, Osmosis and Active Transport; 13, Activities of Enzymes; 14, Fermentation and Aerobic Respiration Compared, 15, Chromosome Movements during Cell Division; 16, Cell Division; 17, The Phyla of the Animal and Plant Kingdoms; 18, Comparative Anatomy of some Skeletal Features; 19, Dissection of the Fetal Pig; 20, Sexual Reproduction and Vegetative Reproduction (Without Respect to Sex); 21, Reproductive Structures in Flowering Plants (Angiosperms); 22, Seed and Fruit Production in Flowering Plants; 23, Monocot and Dicot Seeds, Seedlings and Leaves; 24, Histology of the Female Reproductive Tract, 25, Histology of the Male Reproductive Tract, 26, Response of Animals to Pregnancy Urine Hormone; 27, Transcribing DNA, mRNA and tRNA to Sequence a Protein; 28, Do Environmental Factors Affect the Action of Genes?; 29, The Inheritance of Genetics Traits; 30, Searching for Bacteria Resistant to Streptomycin and Increased Salt Concentrations; 31, Inheritance of Specific Proteins; 32, Photosynthesis and the Synthesis of Starch; 33, Digestion of Foods; 34, Measurement of Oxygen Use; 35, Urinalysis (Urine Analysis); 36, Reflex Action; 37, Influence of Thyroid Hormone on Rate of Development; 38, A Study of Plant Communities; 39, Succession from one Environment to Another; 40, Effect of Physical and Chemical Factors on Animals, 41, Termite-Flagellate Interaction; 42, Growth of a Population.

The teacher's guide also includes introductory remarks for teachers, lists of materials and equipment, methods for making solutions and other preparations, suggestions for introductory discussions with the class, and procedures for doing the various exercises. It contains answers to discussion questions, but does not give sample data for the experiments. The material has enough flexibility to allow the teacher to express his or her own creativity, yet structured enough to give the student a feeling that he is proceeding properly through the activities.

HUMANITIES

The humanities classroom becomes a place where critical examination of the quality of the student's own life takes precedence as an intellectual pursuit over the academic exercises from weighty textbooks. Students who have wrestled with the question of form and content in the making of a collage, photographic essay or a mask will understand more easily the application of of this same question when it is asked with reference to ritual drama, modern architecture or abstract painting. Likewise, the student who has discovered how to make imaginative use of slides, stage design, costumes, videotape and film in the creation of an original dramatic production, can hardly fail to realize the prevailing influence of media upon every aspect of contemporary life. By the same token, students who have realized the richness of poetry and drama in their everyday cultural experience, say, for instance in a church service, can evaluate other (alien) cultural and aesthetic standards.

As students and teachers enter into real dialogues about the world they share in common, the actual physical boundaries of the classroom begin to dissolve. The artificial boundaries between disciplines are the first to go, and then those that separate the university from the community-at-large. The dissolution of both of these artificial boundaries liberates many teachers and the effort and energy usually applied to fragmentation can be applied to creative re-integration. Students go out into the community and encounter local people (artisans, musicians, drama groups, ministers, storytellers, root doctors, etc.) on their own turf, or invite them onto the campus to perform and/or to answer questions.

The publication noted below is a Teacher's Manual and it covers the whole course. There are no Student Manuals as yet. Because so much of the course is based on the student's active participation in his work, each sequence combines a content section (basic concepts and theoretical ideas) with practical exercises and techniques to invite the student to articulate his perceptions through similar means. Slides, records, tapes and films supplement each sequence as well as drawings and photographs by teachers.

Man and his Creative Awareness - Teacher Manual 494 + viii , $9.10

The sequences are as follows:

African and Afro-American Writing: Students deal with African and Afro-American literature in a manner that will show the similarities and differences between the two; their explorations include readings of African and Afro-American novels, short stories, poetry, and dramas. Numerous student projects are described.

Dance and Drama in the Classroom: A diverse, multifaceted sequence in which the classroom becomes a theater stage and a dance studio. Many ways into dance, through student activities, are furnished, and relationships to other sequences are also developed between, for instance, sacred dancing and Man's stance as Mythmaker. Original dance and dramatic invention is stressed as a means of understanding how the combination of mediums heightens the possibilities for communication.

Looking at the Visual Arts: A group of writings and related exercises, using slides, videotape, and films from the material side of the sequence, and an art workshop to sensitize students to the scope of the visual arts deals with the participatory angels of creative involvement. A guide for establishing an art workshop as an integral part of the course is detailed.

Looking at Music: Through the use of all forms of black music, as well as "found" music (simple compositional techniques for non-musical people students arrive at an understanding of the scope of music and the expressive possibilities of the form. Copious use is made of commercial recordings and tapes prepared by the ISE staff.

The Stances of Man: A group of materials that aid students in experiencing and recognizing the possible attitudes of man toward life, toward the world, and toward the universe. In assuming these attitudes man takes on one of three primary identities.

1. Mythmaker - through the identification (both conscious and unconscious) of heroes and heroic acts, and in the use of stories to develop their religious and philosophical ideals.

2. Protester - against the particular order in which he finds himself, whether social, psychological, moral, religious, or political.

3. Witness - to the essential order and coherence that he finds beneath the apparent chaos around himself.

Slide sets

Afro-American Artists: New York and Boston (38 slides)	$15.30
A Means for Approaching the Visual Arts through Students' Projects in Photography (32 slides)	11.00
A Survey of Afro-American Artists (20 slides)	7.70

Tape sets

(Each tape is 1,800 feet and runs at 3 3/4 IPS)

6 tapes on various aspects of religious and secular black music	$27.00
1 tape of Afro-American [illegible]ts reading their poetry	4.50

PHILOSOPHY

The course seeks to connect formal education with the student's personal life. Each sequence introduces the question with which it is concerned in terms of the student's own experience, then encourages the student to explore solutions on his own, and only then presents him with the reflections of philosophers on the subject.

The student is asked to question the knowledge claims he has received from school and college and from society and to analyze the basis for the acceptance or rejection of such claims. The purpose of this approach is not to produce passivity or cynicism, but to enable students to understand the basis for the judgments that our lives require us to make.

African World-View: Student Manual — 176 + xii pp. — $2.35

This sequence undertakes the consideration of African myths of creation, of God, of death; African religion; African philosophy; and African moral and jurisdictive principles. It offers a non-Western approach to problems that proves upon analysis to be universal.

Philosophy of Religion: Student Manual — 128 + X pp. — $2.00

This sequence concerns the nature of religious experiences through the analysis of the Bible, and the social criticism of religion (Christianity) by Black theology.

Social and Political Philosophy: Student Manual — 152 + xii pp. — $2.25

This sequence examines specifically the basic social presuppositions. In doing this, Marxian analysis is introduced to establish the theoretical frame of reference; the nature of Marxism and Black Liberation; and the nature of Black liberation.

Epistemology: Student Manual — 177 + xxi pp. — $2.25

This sequence examines and analyzes the problems of human knowledge, the problem of belief, the problem of establishing truth, and the problem of gathering truth, and the problem of gathering evidence. It analyzes claims to knowledge in both the African and Western traditions.

Philosophical Inquiry: Teacher's Manual — 113 + xi pp. — $3.00

This publication covers all four sequences.

COUNSELING

Students are concerned with a wide variety of issues: marks and grades, black power, preparing for and finding a job, sex and birth control, fraternities and social behavior, drugs, athletics, student protest, and being taken seriously by an adult world. While teachers are concerned with these issues, they are important enough to be the central concern of an additional person. Teachers begin their work with students from a reference of a given subject area and work toward student development, the counselor works toward the same objective from a base of individual growth and maturation.

The counselor aids students through programs to explore drug usage or sex and birth control, and he provides information on jobs and preparation for jobs. The counselor is seen as an arm of the student body as well as of the administration, interpreting student views to teachers and representing student opinion to the administration.

Handbook for College Counselors	69 + xi pp.	$2.60
Guidance and Counseling Services in Transition	est. 225 pp.	$3.80

Includes articles by counselors, cases studies, and forms.

APPENDIX B: THE 1971 SUMMER WORKSHOP

Purposes of Workshop

Since the summer of 1967, the Institute for Services to Education has managed Summer Workshops, initially of 8 weeks duration then of 6 weeks duration, as an essential part of the Thirteen-College Curriculum Program.

The theory of the Summer Workshop is that the teachers, counselors, and directors who make up the program need to get together for an extended period of time to rethink and rework what they are doing. They need to be free of the immediate pressure of daily teaching, but under the more distant pressure of preparing real stuff for real classrooms. The long summer vacation in the academic year is ready made for this purpose.

For an experimental effort, to begin with a Summer Workshop is especially important. Attempting to work with teachers engaged full-time in teaching and just devoting extra hours to innovation and experiment poses the difficulty that the program will start already locked into established practices, with no opportunity to achieve the necessary distance.

The Summer Workshop is designed for different levels of creativity among teachers. It is proper that after a certain number of years there be a good supply of curriculum materials and activities on hand for the use of teachers, but it is not proper that these materials and activities foreclose future developments. There is a tension in the program between teachers learning about previous results as embodied in the materials and developing their own materials. Some teachers benefit from straight forward use of the materials developed so far; others are stimulated to build further on that experience, working with their colleagues to achieve additional results.

The main business of the Summer Workshop is done by the participants in the different areas working in small groups called workshops. The principle kind of workshop, called a teaching workshop, serves to introduce teachers to the curriculum materials developed so far and to bring teachers together to work on new materials. Other workshops enable teachers to advance in their own fields. Thus, a modern algebra course may be taught in the TCCP style and a course on writing and playing music given for "non-musical" teachers. Workshops are of a variety of forms, depending on the task at hand -- demonstrations, studios, laboratories, seminars. Also, in each of the areas, guest speakers are invited to the Summer Workshop for a few days to give lectures and demonstrations on special topics. Opportunity for participants from different areas to share ideas and compare notes is provided by informal occasions such as meals and late-afternoon social hours.

The Summer Workshop offers interested teachers an opportunity to obtain graduate credit at several universities. The necessary additional study is done under the direction of the ISE staff and the teachers pay the universities the necessary fee.

Participants and ISE Staff

It will be helpful to say something about the characteristics looked for in the selection by the colleges of the teachers to participate in the program, and about characteristics looked for in the selection of the ISE staff.

The teachers need to be willing to experiment with new methods of instruction, which in the TCCP means learning how to make learning more active. The teachers need to listen as well as talk; to pose new problems for themselves. Teachers need to use paperbacks, magazines, and materials of their own preparation rather than just rely on textbooks.

ISE maintains professional staff in each of the areas in which the TCCP is involved. There are three equally important criteria used in the selection of these men and women (although to be sure, not everyone satisfies each criterion equally): one, experience teaching in the black colleges; two, proved ability as a creative teacher and developer of new curriculums; ability to demonstrate good teaching, not merely talk about it; three, recognition through publication and other means as a contributor to a given field -- English, chemistry, educational research, etc. For English and the humanities, this last category includes work in the creative arts -- poetry, music, painting -- as well as criticism and scholarship.

Smooth functioning of the Summer Workshop also requires an overall director, two administrative assistants for the director, clerical support, and good messenger service.

Curriculum Units and Teaching Teachers

The curriculum materials and activities that constitute a course are built up from previously developed curriculum units. A unit can last from a few class periods to a month or so. A unit focuses on a particular topic or activity. Physically, it often includes a number of related components -- readings, guide for teachers, equipment, tests, classroom practices. The Summer Workshop starts with a sizeable collection of curriculum units already on hand, developed at the previous Summer Workshops. The teaching workshops serve to introduce the units to the teachers and to involve the teachers in the development of their own units.

The reason in the summer of 1967 for starting the TCCP with the development of units was simply that no one knew enough to start with an entire course. As the program progressed, different units were developed and tried out; some were dropped; some were developed further; and new units were introduced and tried out. The next step was to put successful units together in sequences, with different sequences also explored experimentally. Finally, several sequences were put together to constitute a course. (Note: as a matter of program usage, the term "unit" is sometimes also used to refer to a sequence.) There are now more than enough units for courses in each field and different teachers put together their courses in different ways, many adding their own units as parts of their courses.

The basic design of the curriculum units is to open matters up for students so that they can devise and interpret problems for themselves. Units encourage students to work with things, to engage in activity, to formulate and solve problems. In math, one of the units focuses on students' learning the computer-language BASIC, so that they can program problems in mathematics and physics, problems assigned by teachers or of their own making. In English, one of the units focuses on Chamber Theater, in which classroom dramatizations serve as incentives to writing and reading and as aids to understanding the matter of point-of-view in fiction. In social science, one of the units focuses on Community Studies, so that students can find out for themselves how local institutions work, from TV stations to welfare agencies.

The basic design of the teaching workshops is to involve the teachers in working with units. First, the ISE staff and veteran teachers demonstrate teaching, using the units, with the other teachers serving as students. The teachers themselves do computer programming, carry out chamber theater dramatizations, undertake community studies. Then, the new teachers take turns doing the teaching, again with the other teachers serving as students. Here the teachers assume responsibility for arranging for all the equipment, reading matter, tapes, records, field trips, just as if they were teaching in their own classrooms. Finally, the new teachers collaborate with each other on the development of their own units, and teach their units to the other teachers.

Thus, at the Summer Workshop, the teachers are engaged in fresh thinking about teaching by actually teaching in new ways, not just talking about it. The approach is specific, technical, and task oriented. Theorizing is not empty, but related to classroom practice. Discussion of teaching follows demonstrations, and hence is truly analytical and practical.

Workshop Description and Schedules in Mathematics and Humanities

The best way to indicate the content and organization of the Summer Workshop is to describe in several fields the workshops offered and the schedules followed.

Mathematics
Workshop Descriptions

Modern Algebra

Basic concepts taught using TCCP approach.
Participation voluntary (taken by 15 teachers).
Second through sixth week, every morning.

Demonstrations by Staff and Veteran Teachers

Continuation just for mathematics teachers of demonstrations and discussions begun for all teachers.
First and second weeks.

Computer Programming

Sections held both for mathematics teachers and physical science teachers.
Second week, one session a day, 1 1/2 hours a session.

Mathematics Laboratory

Games, puzzles, physicals models for teachers to explore and find ideas for own mathematical units.
Throughout conference, at teacher's convenience.

Committees

Teachers work on one or more of the following study groups or committees.

Outline Committee -- to help new teachers choose a core of units for use in their courses. Based on an intentional oversupply of materials for a year's work.

Evaluation Committee -- to devise new tests to evaluate student progress in the style of the new materials and activities.

Model Committee -- to devise additional models, or new interpretations for familiar models, for use with units.

Pre-Calculus Committee -- to develop units bearing on concepts of the calculus, for prospective mathematics majors.

Computer Committee -- to develop new units for use with the computer.

Writing Committees -- to compile reports of classroom demonstrations.

Individual College Planning Committee -- to help teachers from a given college work together to organize their course.

Committees were begun the end of the second week by veteran teachers; new teachers joined committees the end of the third week.
Meetings of individual committees scheduled one at a time, other teachers during that period worked on projects developing out of own committees or sat in on meetings}.

Demonstrations by New Teachers

Further continuation of demonstrations followed by discussions of those demonstrations, but with new teachers teaching topics they had developed, with other teachers serving as students.
Third through sixth weeks.

Teaching Strategies

Veteran teachers describe own classroom experiences, followed by general discussion.
Third week, and occasionally later.

Demonstration of Selected Freshman Materials For All Teachers

Orientation of teachers to curriculum development in four freshman fields, not just to their own field:
- English
- Mathematics
- Social Science
- Physical Science

First and second week.

Mathematics – Workshop Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
July A.M.	5	6 Plenary Session	7 Modern Algebra Demonstrations by Staff and Veteran Teachers	8 Film on teaching	9 Same for Special Saturday Workshop
P.M.	Arrival and Registration	Mathematics Orientation	Film on teaching	Demonstration of Selected Freshman Materials	
A.M.	12 Modern Algebra Demonstrations by Staff and Veteran Teachers	13	14	15	16
P.M.	Demonstration of Selected Freshman Materials		Computer Programming Mathematics Laboratory	Committees	
A.M.	19 Modern Algebra Demonstrations by New Teachers Teaching Strategies	20	21	22	23
P.M.	Computer Programming Mathematics Lab. Committees (Outline)	(Models)	(Outline)	(Models)	
A.M.	26 Modern Algebra Demonstrations by New Teachers Committees (Pre-calculus, Models)	27 (Evaluation)	28 (Computer)	29 (Pre-calculus, Models)	30 (Evaluation)
P.M.	General Meeting Teaching Strategies	Mathematics Laboratory Committees (Writing)	Demonstrations by New Teachers Teaching Strategies	Committees (Writing)	Mathematics Laboratory
August A.M.	2 Modern Algebra Demonstrations by New Teachers Special Lecture (Dr. Hall)	3 Committees (Evaluation)	4 (Computer)	5 (Evaluation)	6 General Meeting
P.M.	Committees (Pre-calculus, Models)	Demonstrations by New Teachers (Writing)	(Pre-calculus, Models)	Demonstrations by New Teachers (Writing)	Mathematics Laboratory
A.M.	9 Modern Algebra Demonstrations by New Teachers Committees (Computer, Pre-calculus)	10 (Evaluation)	11 General Meeting Philosopy of Mathematics Program	12 Reports of Committees	13 Plenary Session
P.M.	Demonstrations by New Teachers Committees (Models)	(Writing)	Mathematics Laboratory	Teachers have individual conferences with Staff	Departure

Humanities
Workshop Descriptions

Art Studio

Creative work in art for teachers with little training in art -- paint, paper-mache, collage, clay, print-making, multi-media presentation
Open every afternoon; one afternoon a week required of all teachers; throughout conference.

Black Literature Workshop

Examination of black writers of Africa, the Caribbean, and America; the development of standards appropriate to such an examination.
Two mornings a week, required of all teachers, throughout conference.

Music Workshop

Examination of black music (jazz, blues, gospel, etc.) and its African and European roots; criteria for examining any music; composing for teachers with little training in music.
Two mornings a week, required of all teachers throughout conference.

Photography Studio

Creative work in film-making and still photography for teachers with little training in these fields.
Open every afternoon; one afternoon a week required of all teachers; throughout conference.

Dance and Drama Studio

Creative work in dance and drama for teachers with little training in these fields.
Met on a voluntary basis throughout conference.

Occult Workshop

The present-day revival of interest in astrology, eastern religion, etc. -- claims made; commercial aspects; relationship to interest of black students in African religion; relationship to myth, ritual, and religion in Western Culture.
Met on voluntary basis throughout conference.

Workshop Feedback Sessions

At the beginning of each week, starting the third week, the small groups that had been developing new materials in the other workshops made presentations before the entire group.

Old Units Workshops

Revision and editing of units ("Stances of Man," etc.) previously developed.
By groups of not more than ten teachers each, chaired by one of the teachers who helped initiate the unit in question.
Met as necessary at the convenience of the teachers.

New Units Workshop

As offshots of the studios, workshops, and seminars listed above groups of teachers formed to develop new materials and activities for classroom use.
Met as necessary at the convenience of the teachers.

Demonstration of Selected Freshman Materials For All Teachers

Orientation of teachers to curriculum development in four freshman fields, not just to their own field:
- Mathematics
- English
- Social Science
- Physical Science

First and second week.

Humanities – Workshop Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
July A.M.	5	6 Plenary Session	7 Art Studio	8 Black Literature Workshop	9 Music Workshop Same for special Saturday workshop
P.M.	Arrival and Registration	Humanities Orientation		Demonstration of Selected Freshman Materials →	
A.M.	12 Planning Succeeding Weeks	13 Black Literature Workshop →	14 →	15 Music Workshop →	16 →
P.M.	Demonstration of Selected Freshman Materials →		Art Studio	Photography Studio	Optional, including Dance and drama Occult Old units, New units
A.M.	19 Workshop Feedback Sessions Presentation by Small Groups	20 Black Literature Workshop →	21 →	22 Music Workshop →	23 →
P.M.	Art Studio	Optional, including Dance and drama Occult Old units, New units	Showing of films for all workshops	Photography Studio	Optional, including Dance and drama Occult Old units, New units
A.M.	26 Workshop Feedback Sessions Presentation by Small Groups	27 Black Literature Workshop →	28 →	29 Music Workshop →	30 →
P.M.	Art Studio	Optional, including Dance and drama Occult Old units, New units	Showing of films for all Workshops	Photography Studio	Optional, including Dance and drama Occult Old units, New units
August A.M.	2 Workshop Feedback Sessions Presentation by Small Groups	3 Black Literature Workshop →	4 →	5 Music Workshop →	6 →
P.M.	Art Studio	Optional, including Dance and drama Occult Old units, New units	Showing of films for all Workshops	Photography Studio	Optional, including Dance and drama Occult Old units, New units
A.M.	9 Workshop Feedback Sessions Presentation by Small Groups	10 Black Literature Workshop →	11 →	12 Music Workshop	13 Plenary Session
P.M.	Art Studio	Optional, including Dance and drama Occult Old units, New units	Showing of films for all workshops	Photography Studio	Departure

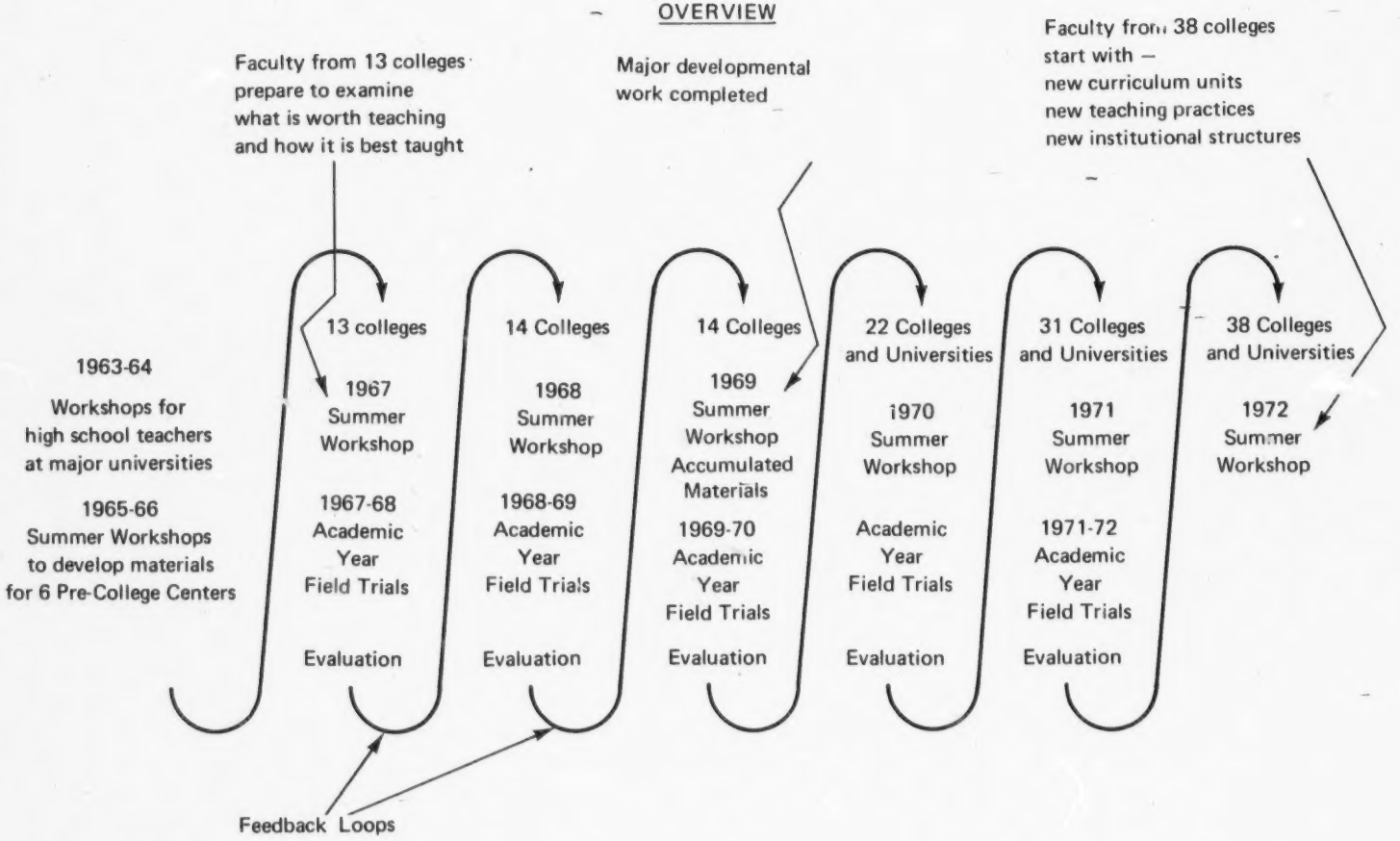
APPENDIX C: THE CYCLES OF DEVELOPMENT

Teachers, counselors and directors need to try out ideas, get feedback, make revisions and try again. In the Cycle of Development, there is invention during the summer, tryout during the academic year, revision with new ideas introduced the following summer, and further tryout the following academic year. The cycles continue several years leading to the publication of materials, new patterns of teaching, and institutional change.

The Thirteen-College Curriculum Program (TCCP) did not start from scratch, but built, in turn, upon the earlier experience of ISE. In 1963-64, ISE, or rather a new organization that became ISE, began activities by organizing workshops for high school teachers at major universities. In 1965 ISE was incorporated. In 1965-66, ISE organized Summer Workshops to develop curriculum units in English and mathematics for use in six Pre-College Centers which it also helped organize. This latter effort became a major model for Upward Bound.

The present section offers first an overview of the Cycles of Development from 1967-72 and then covers the individual cycles in greater detail. Such a review constitutes a history of the project. It explains how the results described in the main body of the report were achieved and measured.

OVERVIEW


Faculty from 13 colleges prepare to examine what is worth teaching and how it is best taught
Major developmental work completed
Faculty from 38 colleges start with –
new curriculum units
new teaching practices
new institutional structures
1963-64
Workshops for high school teachers at major universities
1965-66
Summer Workshops to develop materials for 6 Pre-College Centers
13 colleges
1967 Summer Workshop
1967-68 Academic Year Field Trials
Evaluation
14 Colleges
1968 Summer Workshop
1968-69 Academic Year Field Trials
Evaluation
14 Colleges
1969 Summer Workshop Accumulated Materials
1969-70 Academic Year Field Trials
Evaluation
22 Colleges and Universities
1970 Summer Workshop
Academic Year Field Trials
Evaluation
31 Colleges and Universities
1971 Summer Workshop
1971-72 Academic Year Field Trials
Evaluation
38 Colleges and Universities
1972 Summer Workshop
Feedback Loops

First Year: Summer 1967 - Spring 1968

Summer Workshop

Began with 126 faculty (teachers, counselors, and directors) from Thirteen-College Consortium (TCC).

Began with English and mathematics units from Upward Bound program of Pre-College Centers; units demonstrated to teachers by ISE staff.

Made major start on development of new units in English, mathematics, social institutions, and an interdisciplinary science course, by teachers and ISE staff.

Units consisted of new readings, tapes and other materials, and new learning strategies.

Academic Year

Established college-within-a-college format on campus; 100 students take entire freshmen year in program, which consists of the four courses developed during the summer, with own faculty.

First field trials of new units, finding out what worked and what didn't work.

ISE staff worked in own office to develop new units and new steps in program, and visited programs to assist teachers and give demonstrations.

Held two evaluation conferences for all teachers, one late fall to compare notes on results and the other in the spring to compare notes again and to plan for 1968 Summer Workshop.

Evaluation

Started gathering statistics for first generation of students, both in Thirteen-College Curriculum Program and in regular program. Statistics included beginning and end-of-year scores on standardized achievement and attitude tests; drop-out rates, grades.

Started gathering documentary account of effects of the program on students, teachers, and institutions. Done through year-end reports by teachers and through conferences of ISE staff with teachers, students, and college administrators.

In work independent of ISE, Office of Economic Opportunity employed consultants to visit campuses and report observations.

Too early for statistical results, but first documentary results show teachers using units with enthusiasm, students involved, program gaining acceptance

in the institutions. Difficulty with mathematics and science departments, in gaining credit for work in program for majors in these fields.

Second Year: Summer 1968 - Spring 1969

Summer Workshop

Added fourteenth college to Thirteen-College Consortium (name unchanged), total number of faculty now 180.

Reviewed units developed during first summer in view of academic-year's experience; further development of those judged successful, initiation of additional units as needed.

Dropped interdisciplinary science course (too difficult a task with present resources); started development of semester course in biology and semester course in physical science, the latter based on PSNS course.

Introduced in social institutions unifying theme of "Modernization."

Added two sophomore courses to program, for first generation of students now sophomores -- humanities and philosophy, the latter focussing on common elements of knowledge.

Academic Year

Expanded college-within-a-college format to include not only 100 freshmen taking all courses in program but 100 sophomores taking two courses in program.

Second field trial of freshman units; first field trial of sophomore units.

Continuation by ISE staff this year (and in following years) of work on new units as well as visits to campuses.

Held evaluation conference of all teachers in spring, plus separate conferences in each area to plan for 1969 Summer Workshop. Also held spring conference of students, three or four from each campus, elected by classmates.

Evaluation

Sophomore (first generation of students) given achievement and attitude tests again at the end of the sophomore year. Freshman (second generation of students) given same tests, etc., as previous year's freshmen.

Documentation continued, with essentially same results. Credit for science and math majors continued to be a problem, but with some improvement.

Office of Economic Opportunity employed same consultants independently to visit campuses. Report basically favorable, but critical of ISE staff as playing too dominant a role at Summer Workshop.

Third Year: Summer 1969 - Spring 1970

Summer Workshop

Expanded to 190 faculty from 14 colleges. A small number of beginning freshmen participated as students and coinvestigators. (This program was judged very valuable, but it has proved impossible to obtain the necessary funds to repeat it.)

Distinctive format for Summer Workshop has now emerged.

1) For new teachers: introduction to previously developed units, first, through demonstrations of materials by ISE staff and veteran teachers; second, through practice teaching of teachers by teachers themselves.
2) For veteran teachers, and to some extent new teachers: review of previously developed units, editing of some units with a view to wider use as program expands; initiation of new units.

Academic Year

Third field trial of what is now a large number of units for freshman courses, approximating a year's work in each of three subjects, and half a year's work in two -- combining new content with new teaching strategies. Second field trial of humanities and philosophy courses.

Evaluation conference for all faculty held in spring, plus separate conferences in curriculum areas held to plan 1970 Summer Workshop.

Evaluation

Continuation of statistical and documentary studies for each generation of students.

Results of statistical studies for first generation of students starting to come in. Taking the colleges as a whole, TCCP students have the edge on regular students in terms of yearly gains in scores on standardized achievement tests, gains on standardized test on self-concept in relation to learning, grades, percentage holding student offices on campus, lower drop-out rates.

U.S. Office of Education and National Science Foundation arranged for independent visits to campuses by own staff and consultants.

Fourth Year: Summer 1970 - Spring 1971

Summer Workshop

Added two new consortiums -- the Five-College Consortium (FCC) and the Three-Universities Program. The Three-Universities Program is a two-year M.A. in either English or history. Designed for graduate students who are training to become college teachers, it offers experience in curriculum development at the Summer Workshop and an internship in TCCP colleges.

Participants comprised 250 teachers, counselors, and directors and 27 graduate students from 22 colleges and universities. New teachers were added to the participants from the Thirteen-College Consortium both by replacing veterans of more than two years and by implementation (see Academic Year).

Expanded ISE staff for summer by adding several program veterans from the participating colleges as staff. This represented the development of indigenous expertise out of working teachers as compared to theoretical expertise.

Redirection of physical science, to use materials developed by teachers and ISE staff, to replace PSNS. Redirection of humanities to include more non-western art and music and more "creative art for non-artists".

Continued revision and editing of old units and initiation of new units. Bega development of matching Student Manual and Teacher Manuals for many units, preparatory to more wide-spread use of materials.

Academic Year

Started implementation of TCCP that is, expansion from college-within-a-college format to adoption as regular freshman program. Some campuses began expansion across the board, others began expansion just in areas deemed ready.

First test of units, and initial college-within-a-college format, with a new group of colleges: the Five-College Consortium.

First test of units, and a program of experimental teaching, as part of regular M.A. program: the Three-Universities Program.

Held separate spring evaluation conferences for Thirteen-College Consortium and Five-College Consortium, and series of planning sessions by curriculum areas for 1971 Summer Workshop.

Evaluation

Statistical studies and documentation continued in Thirteen-College Consortium, and only partially expanded (to the extent funds available) into Five-College Consortium. Similar though less comprehensive results occur in other consortia. Retention data for the program is impressive but no funds are available for detailed analysis of grades and test data.

ISE arranged for independent visits by men who had served as consultants to OEO for visits during first two years of program. Reports generally favorable; Criticisms reported directly to ISE staff at special meeting and used in planning 1971 Summer Workshop and developing strategies for institutional change.

Exit questionnaires given to first generation of students, and to two control groups, all now seniors. Looking backward, TCCP students regarded freshman and sophomore TCCP courses more favorably than regular students regarded freshman and sophomore courses in regular program, with regard to providing more active and relevant learning.

First report of attrition studies for four years of college show that over 60 percent of the TCCP students entered their senior year as compared to approximately 45 percent of a control group of regular students.

Fifth Year: Summer 1971 to Spring 1972

Summer Workshop

Added new consortium -- the Eight-College Consortium (ECC) -- and added new college to Five-College Consortium (name unchanged). Expanded implementation program. Added second generation of graduate students in Three-Universities Program.

Teachers, counselors, and directors numbered 390, coming from 31 colleges and universities. Well over half the participants were new to the program. There were 37 graduate students in the Three-Universities Program. The ISE staff totaled 50 people, 37 professionals and 13 administrative and secretarial. Half of the staff came from ISE's Washington office and half were recruited specially for the summer program.

Added graduate credit for interested participants who did certain special work; credit awarded at North Carolina A&T State University.

Redirection of Social Institutions to include students and teachers investigating local institutions.

Focussed on introducing new teachers from established consortiums, and new consortiums, to now extensive collection of units; while still engaging new teachers in necessary task of developing units themselves.

Focussed on forming now larger numbers of teachers in programs on campuses into more cohesive, mutually supportive groups.

Focussed, especially for directors, on developing strategies for further implementation of program (that is, gaining adoption of program as part, or whole, of regular program) and on strategies for institutional change (that is, greater rewards for teachers of freshmen, good teachers, innovative teachers, etc.)

Academic Year

During the academic year the number of faculty in the program in all the participating colleges added to 456. The number of freshmen (not including sophomores) in the program added to 8,900 out of an estimated total freshman enrollment of 18,250.

Added sophomore year to Five-College Consortium and started implementation.

Started second graduate year of Three-Universities Program for first generation of students and a revised first year for second generation of students.

Started freshman year in college-within-a-college format for Eight-College Consortium.

ISE staff and teachers continued preparation of Student Manuals and Teacher's Guides; also developed lists and costs of necessary supporting materials and equipment (per 100 students) in program.

Held spring evaluation conferences with established consortia and planning sessions for 1972 Summer Workshop with established and new consortia.

Evaluation

Continuation of statistical studies and documentation. In Thirteen-College Consortium emphasis in documentation is on implementation and institutional effects.

Second exit questionnaire, for second generation of students, now seniors.

Continued attrition studies. Discovered that to be complete studies must run 5 or 6 years. For example, 34% of the 1971 graduates attended college 5 and 6 years before their graduation. If this is the pattern, then 4 years data will yield incorrect inferences.